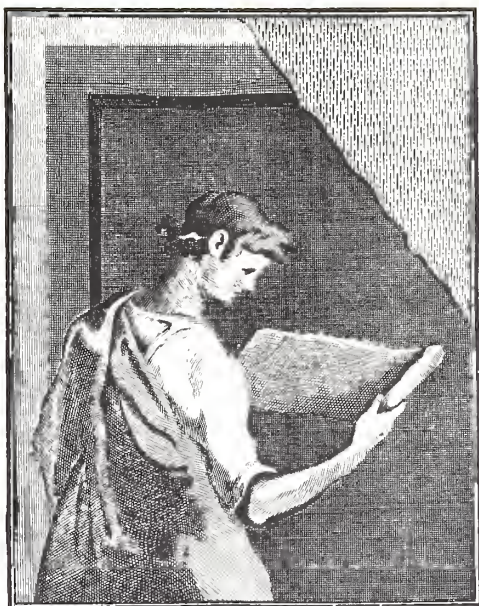




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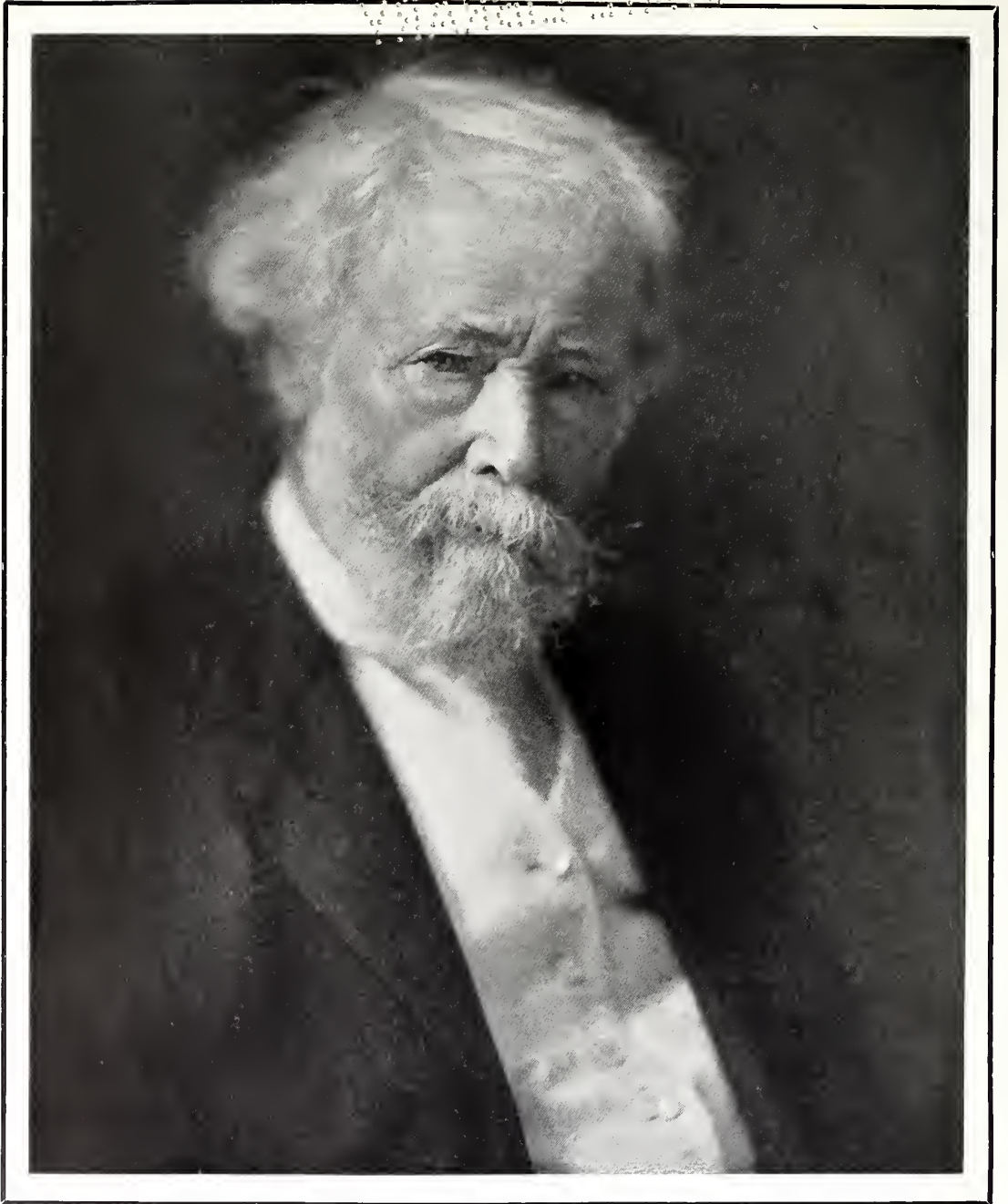
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JOHN H. GARO





# PHOTO - ERA

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## Opening a Studio in the City

J. CLYDE WILSON



WHEN a man has failed in everything else he opens a store. There is a popular notion that any one can run a store. "Why, all that is necessary," runs the fallacy, "is to get in a stock of goods and wait." It is much the same with photography. Every photographer you ever met, engaged in the work as a profession, expected at some time or other to open a studio. For all that is necessary to run a studio, you know, is an acquaintance with photographic technique. If you can make a negative, and a print from it, why, ha! you can run a studio. And so each year there are 20,000 recorded business-failures, and perhaps as many more unrecorded, among which there are, of course, dozens of studios.

Why is this? Who can answer? There is, of course, a variety of reasons, but the chief one, perhaps, is unfamiliarity with retailing-conditions — a failure to understand the peculiar whims of the buying-public. As part of that public we do not buy everything we see, nor do we even see everything that we might buy. The location of a studio is highly important, as is the location of every retail establishment which serves the public directly. If we are going to make people want pictures we must keep pictures constantly before them — bring our wares to their attention, so that we may awaken sooner or later a desire for them. So at the very outset the photographer ought to be careful where he opens his studio. Cheap rents near busy streets but away from them have a sinister influence over us. It is easy to reason out that \$60 saved here will go a long way on our other expenses and bring our profit nearer. Sometimes it will, but the curtailed advertising-opportunity, the slowness with which business builds without its help and the discouragement which is likely to overtake one may lead to speedy failure. One ought to look into this matter carefully before making a decision.

Sometimes rents in busy sections are too high. At least, they are too high for photographic purposes, for the advantages may not merit the price asked. Some businesses which repeat sales oftener than do photographs can stand these high rents and prosper where a studio could not. Again, an old and well-known studio might be able to engage elaborately laid out quarters in such a location and not mind the burden, while an equally good but unknown place would go down under the burden before the public had really discovered it. This mistake is often made by the inexperienced, who assume that if a certain location is profitable to one place it will be to another, the work being of like quality. Some of the business of older studios must surely divert to it. But that does not follow by any means, for as human beings we do not act strictly without bias. The old studio has won us by some effort, by its individuality perhaps, by its reputation in the community or by some previous successful performance. Even if the new studio is seen, and judgment acknowledges its work the equal of the older place, still, the older possesses the advantages named in helping it retain the business, and the new studio whose work is admired is not favored with our patronage. It is well to think of these things when locating near a competitor.

With little capital on hand, and none to waste, the high rents down town will perhaps scare us, and it may be just as well if they do. One of the commonest causes of failure is insufficient capital, and the amount that makes sufficient capital is always relative. It depends not only upon the total expense but even more upon the gross income. But in any new business this is likely to be beneath the expectations, so it is just as well to start modestly to enable one to meet the very worst conditions and not be wiped out in a single blow. To such the small outlying city-studio will prove alluring. Not much of an investment will be required, although it is likely

to be all or more than one expected to spend, for business never comes at the outset in an avalanche. To have the place and be ready for business does not bring the public serambling to one's doors. Far from it. We get your modest circular or announcement, glance over it and toss it into the waste-basket. Perhaps the housewife is sweeping when it comes, tears it open during a brief rest and glances at it. "What is it?" asks her helper. "Oh, just some old ad," she announces, "a photographic studio over on Jefferson Street."

"Is that all?" replies the disappointed assistant, hoping for a pleasant invitation out; and your carefully studied announcement, which you had worked over so hopefully and lovingly, perhaps, goes into the dust-pan and to a quick oblivion. We invariably overestimate the impression our establishment and our advertising make upon the public. Because we are so near to our venture, thinking of it constantly, in our waking hours and in our dreams, we become sort of hypnotized by it, and it assumes an importance which, viewed disinterestedly, we would see it did not merit.

Persistence, however, will have its effect; and let it be said here that the best kind of advertising is word of mouth. "We are advertised by our loving friends" is the slogan of a well-known manufacturer, but he has no monopoly upon that kind of advertising, for most small businesses are so advertised. This being so, it devolves upon the studio to begin the process of making friends at the earliest possible moment. To make friends is to make customers; but merely serving patrons' demands, on the other hand, is not making friends. Friendship begins in courtesy, and, simple as it may seem, it demands something of a talent; for, carried to the ultimate measure in which I am considering it here, it is one expression of personality. It seems to me that the most successful small businesses are built about a personality. To be a good photographer is only one requirement of success; equally important is a talent for impressing one's self favorably upon a community. To be somebody in a community is sure to attract business, because personality is magnetic, in a sense. The man with personality holds his head



WINTER AMONG THE CASCADE MOUNTAINS

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A. H. BARNES



CHARLES WELLINGTON FURLONG, F.R.G.S.  
JOHN H. GARO





# Photography and the Nude



**L**HIS is a ripe, if somewhat thorny, topic, which from quite the early days of camera picture-work has yielded recurrent outbursts of enthusiasm on the one hand and severe censure on the other. A short time ago the subject was revived by some correspondence in the columns of this journal. Possibly this fact may be a contributing factor to the recent revival of attention to this class of work, as evidenced by the noticeable increase in number of the examples figuring on the walls of the present Salon. It is also safe to say that these are only a small proportion of those submitted to the committee for selection.

Taken as a whole, the nude factor in the present show reflects no little credit on the selecting committee in a twofold manner; viz., catholicity of subject and restrained taste in treatment. It is, however, to be hoped that this wave of subject will not in this case produce a corresponding wave of imitation among camera-folk generally, such as on frequent former occasions produced the vogue of the mud flat, birch and bracken, figure at the window or open door, etc.

In these previous occasions a shower of mud-flat prints did no one any harm, if it did good to no one — except perhaps the plate- and paper-makers; but indiscriminate camera-work with nude figures might, and very probably would, earn for photographers at large an undesirable reputation. The fact is, the successful pictorial treatment of the nude figure by drawing, painting or photography calls for several qualities which, in most workers with the camera, are not infrequently absent, and their absence assuredly spells failure.

In the first place, we must have a very high order of technical ability, not merely as regards the making of what is commonly called "a technically perfect negative," so far as exposure and development are concerned, but as regards the further matter of lighting, tone rendering, form in composition, i.e., craft generally, and, what is far more important, a perfectly healthy taste.

First of all, one must get entirely rid of the vulgar error of thinking that the nude is necessarily always beautiful. It can be beautiful only through treatment. This does not mean that an artist can make the ugly beautiful, but that a beautiful result can come only with beauty of treatment. In the Greek sculpture of the best period the figures treated are beautiful in proportion and form, and dealt with by unerring taste and skill. As Ruskin points out, it is bet-

ter to be right-minded than well-informed. It is very doubtful whether the Greek artists made any study of anatomy, as we understand the term; but in the gymnasia they had before them an unlimited supply of subject for continuous observation. It is interesting to remember that the Greeks used the same word for the beautiful and the good; i.e., noble. Whence we have the root of the idea that art which appeals to the lower part of nature is bad art. This gives us one of our foundation-stones in the treatment of the nude. Work which in any degree suggests sensuality carries thereby its own condemnation.

We commonly apply the terms good or bad taste to matters of general conduct. In some, good taste is intuition; in others, it is chiefly a matter of instruction or rules, etc. Good taste is essential in good art-work. He to whom it is innate is not likely to offend in dealing with the nude, be he prince or ploughman. . . . .

One not uncommon mistake is the failure to discriminate between the nude and the naked. The latter word and idea is associated with clothing. Hence the partly draped figure is far more likely to suggest the naked rather than the nude. Strange as it may seem, the complete nude *may* easily appear far more modest than the partly draped figure. We forget who it was who said that Venus with a stocking on could not possibly look modest, or words to that effect. The idea is quite sound. Any suggestion of clothing on the partly nude — or near the complete nude — figure is extremely apt to suggest the naked. Another danger to be avoided is that of arranging the figure to be looking directly at the spectator, i.e., camera. Again, the nude should not suggest individuality. For this reason any sharp delineation of the face is to be avoided. Thus we very often notice the best results arrange for the face to be in shade or shadow.

It is interesting also to observe that the skilful and observant worker by the aid of the nude figure can often suggest movement in a very striking manner. But whether violent movement or strong emotion be quite suitable for nude treatment is a question many times previously and hotly discussed in connection with classic sculpture — a form of art, by the way, that can offer many valuable lessons to the photographer of the nude. Indeed, there are some critics who hold that sculpture is the one and only art which can deal satisfactorily with the nude figure. One reason is that sculpture is necessarily largely conventional and decorative in general quality.—*The Amateur Photographer*.



# The Adaptability of the Eye to the Illumination



WITHIN the past few years, very considerable headway has been made in the science of illumination, and much interesting information has recently been obtained at the Research Laboratory of the Eastman Kodak Company, upon the sensibility of the eye to various degrees of brightness and contrast in the field of vision. For its measurement and classification, novel pieces of apparatus have been designed and made.

Illumination and photography are related in that they both depend on the laws of retinal reaction — the sensitiveness of the eye to light. And knowledge of the laws which govern the action of light on the eye must be of vital interest to the photographer.

Good lighting is that which produces good seeing, and the standard of good seeing is the ability to see detail with comfort and efficiency. Good photography is the proper illumination and exposure of a subject so that it may be reproduced with detail in highlight and shadow, with bright or dark surroundings comparatively subordinated, and a gradation from highlights to shadows, so that a round object will be given the appearance of roundness on a flat surface.

Good seeing is the degree of sharpness by which we observe contrasts and definition in detail, with an amount of light that produces neither strain nor fatigue. It is governed by the amount of light that reaches the eye. This, in turn, has to do with intensity, distribution and color, depending upon the brightness and contrast in the object, which is determined by its illumination and reflecting-power, and also depending upon the intensity or brightness and position of the light-sources. The indirect lighting-system, now so much in vogue, may be instanced as an aid to good seeing.

The eye is just like a camera in that it has a lens, it has a sensitive surface and it has a box between the sensitive surface and the eye, which encloses the sensitive material. The camera, however, differs from the eye in that a camera exposes its film for a limited time. If the subject is dark, the exposure is long; and if it is light, the exposure is short. The eye has to be exposed all the while to the brightness of the scene that is being recorded. The sensitive material, in both the camera and the eye, is necessarily destroyed by exposure; otherwise we should never know what was happening at all, as no image would be produced. In the camera, it is destroyed or altered once for all, and the exposure has to be

calculated so that the necessary amount of alteration is produced. In the eye the sensitive material is created by the body as it is destroyed, and the amount of the sensitive material or the sensitiveness of the eye is adjusted according to the brightness of the light outside. It is as if in the camera, instead of giving a variable exposure, a fixed exposure were given, and the sensitiveness of the material were altered according to the light.

The eye adjusts itself in the range of 1,000,000 to 1, and may be divided roughly into four levels of brightness, see page 10, (1) the brightest — bright sunlight on a white surface; (2) the indoor average of illumination during the day, which is only  $\frac{1}{1000}$  of the brightness of bright sunlight outside; (3) the average artificial illumination indoors at night, which is  $\frac{1}{100}$  of that indoors in the system; (4) the level illumination at night outside, which is  $\frac{1}{100}$  of that indoors at night.

We thus see that out of doors at night it is roughly one million times less bright than out of doors in bright sunlight. If we could imagine a pair of scales that would weigh anything from a ton of hay to a marble with equally high precision, and would swing perceptibly to the weight of a fly's leg, we would get an idea of the range over which the eye operates.

The brightness of objects, seen by the eye, depends upon its sensibility. We speak, therefore, of lighting in terms of comparative brightness or conditions of light. The actual brightness of an object is relative to the brightness it produces. An illuminated headlight makes a feeble flicker at midday compared to its brilliancy at midnight.

In order that the eye may adjust its sensibility, there elapses a certain amount of time after the change in the brightness level of the objects around, so that the eye has to take a certain amount of time to adapt itself. The iris diaphragm shuts and opens almost instantaneously to make a protection while the retina is adjusting its sensitiveness. In adapting itself to a small change it acts quickly; but when going from bright sunlight to darkness, it requires about half an hour to adapt itself almost completely. Total sensibility, however, is not reached until the end of an hour or so more. Where the contrast is less severe, as in passing from a room brightly lighted by artificial illumination to a darkroom, the time of adaptation is considerably less — about five or ten minutes. The sensitiveness of the eye, when coming from darkness into sunlight, decreases for about an hour. It is found,

experimentally, that the retina takes longer to grow in sensitiveness than it does to lose sensitiveness, so that if a light varies rapidly from bright to dark, the eye loses sensitiveness as the light becomes brighter, and does not recover so much as the light becomes darker, so that you get a diminishing sensitiveness when there are alternate bright and dark periods, as when passing along a street, at night, lighted by street-lights.

In viewing or focusing interiors, the best results will be obtained if the eye is stopped down from the highlights through the halftones to the dense shadows, giving it an opportunity to accommodate itself to the steep drop in intensity between the extremes. It will perform its work more quickly and with less fatigue than if the change were made directly from the highest to the lowest — the detail will appear more quickly and the eye will be sufficiently accommodated to work at maximum efficiency.

Lighting-contrasts vary considerably in living-rooms, work-rooms and offices; but the sensibility of the eye to contrast has a wide working latitude, and, if exacting work is not being done, the general brightness may vary from one to a hundred degrees without discomfort. Where the work demands close attention, the best possible adjustment of light should be made — one that is equal to good interior daylight-lighting must be maintained or created by artificial illumination.

The retina resembles the photographic material in another respect in that it can render only a certain limited range of contrasts, and if the contrast is too great for the eye to be able to bear it, discomfort is produced. In the same way a glare-spot, which is an area of excessive brightness, makes the eye very insensitive to other objects, which is very important in darkroom-lighting. On entering a darkroom, we "get our eyes" much more quickly when we try to pick out objects than if we merely close the eyes — a common practice. If, instead of stepping immediately from a bright illumination into a darkened room, closet, stairway, motion-picture house, etc., a pause of only a few seconds were made, the eye would adjust itself sufficiently so that we could proceed without stumbling or bumping into objects.

Contrasts are due almost entirely to two causes: differences in reflecting-power and depth of shadow. Shadows will also tend to depress the sensibility of the eye. Excessive contrasts should be avoided for the reason that the eye has not been sufficiently developed to accommodate itself to them. The contrasts out of doors seldom exceed 20 to 1 in ratio of brightness.

Where contrasts must exist, as they do in dark-rooms, every endeavor should be made to reduce the ratio of contrast to the lowest figure. This can be done by cutting down the necessary bright light to the least amount consistent with efficiency, and by having an indirect safelight, giving

| <i>Bright<br/>Sunlight<br/>Out of Doors</i> | <i>Interiors in<br/>Daylight</i> | <i>Interiors<br/>at night<br/>artificial light</i> | <i>Out of Doors<br/>at night</i> |
|---|----------------------------------|--|----------------------------------|
| 1000  | 10                               | 1/10   | 1/100                            |

all the light possible consistent with safety.

Contrasts are created by bright

lights, and bright lights are brightest when we look directly at them. A bright light deflected to the darkroom-sink, or bench, would still be as bright as it was before, but it would not appear so, and the eye would not be subject to the constant strain of adapting itself to an alternating brightness and darkness, not to mention the loss of efficiency. All lights should be kept out of the line of vision. Clear glass electric light bulbs should never be used in the darkroom. They create very strong glare-spots, and should be replaced by frosted bulbs, if they cannot be replaced by an indirect method of lighting. Quick changes in brightness should be avoided, as far as possible. While they may merely produce discomfort, they can also produce temporary, and even permanent, injury to the eye. Glossy finishes to woodwork, walls, etc., are another source of glare, and should be eliminated. As contrasts increase in intensity, the eye instinctively demands a higher level of general illumination, which means that the eye seeks a compromise between the extremes of light and dark. The darkroom should be neither unduly dark nor should it have any bright spots, safety and efficiency considered.



Art is not an imitation, but an interpretation — "nature seen through the prison of an emotion," as Alfred Stevens has put it, rather than nature seen through a microscope. The microscope has never taken high rank in art.

JOHN C. VAN DYKE.





IN CRESTA WOODS

G. R. BALLANCE

## The Photographer and His Lights

WILLIAM C. HUBBARD



SINCE Daguerre discovered his curious method of securing a permanent impression of the image produced by a simple converging-lens, there have been but three radical improvements in the science and art of portrait-photography—the method of reproducing the original impression by means of the negative; the use of the dry sensitive emulsion in place of the wet, and the development of a practical substitute for daylight in the form of the mercury-vapor lamp.

Daguerre's discovery—said to have been accidental—remains one of the curiosities of science. Surely no stranger method of obtaining so simple a result can be found in all the annals of invention. Naturally, the uncertainties incident to the practice of his process were commensurate with the scanty knowledge of the chemical reactions involved, and the skill required in carrying them out. Having your

daguerreotype "struck," had something of the fascination of a lottery. What you would see, when the patient artist had finished his mysterious manipulations, only an inscrutable Providence knew. For all this, many really fine portraits were made—portraits of which the photographer of to-day might well be proud.

From the daguerreotype to the "you-press-the-button-we-do-the-rest" photograph of to-day, all successful efforts in improvement have aimed at one or both of two results—to simplify the technical knowledge and labor of the photographer by reducing the number of chemical manipulations which he must perform, and to eliminate sources of uncertainty in the results. In other words, the portrait-photographer, who was at first a more or less artistic chemist, is now almost wholly—if he is not a mere manufacturer of pictures—an artist. His necessary chemical manipulations call for no more technical knowledge than the housewife uses in her kitchen.

In looking backward over the evolution of photographic-chemistry, one fact stands out prominently — that neither the quality of results has been enhanced, nor the cost of producing them reduced, in all the changes that have taken place since the negative-and-print process was perfected. The best portraits made by wet-plates and albumen-paper have not been surpassed in artistic merit by any produced by the most modern methods; and in the actual cost of materials to the photographer, wet-plates and albumen-paper were much cheaper than the dry-plates and emulsion-paper methods in use to-day.

Wherein, then, lies the advantage which has caused these new methods completely to supersede the old? The answer is plain. The newer methods and materials have done away with most of the troubles and uncertainties involved in the processes which they have replaced.

The American, above all other nationalities, has a constitutional aversion to going to any more pains or trouble in his daily life than is absolutely necessary, and is willing to pay a good price for any means of escape. The readiness with which the portrait-photographer took up the more expensive dryplate is attributable to this racial characteristic quite as much as to its advantage in time of exposure; moreover, ready-sensitized papers were not used simply because the results might be more permanent.

By utilizing materials on which the most important and delicate chemical operations have already been performed by expert chemists and manipulators, working under the very best conditions, the photographer has been able to standardize the chemical end of his business to such an extent that failures from this source have been virtually eliminated. The effect on the *art* of portrait-photography has been most salutary. Unquestionably, the general standard of excellence has been raised very materially. There are more *good* photographs made, and less that are hopelessly bad. The average is better.

The last of the great improvements has been slower of general acceptance, the reasons for which are not so easy to understand. That photographs can be taken successfully only by sunlight used to be a fixed idea in both the lay and professional mind. The professional mind is gradually but surely changing. Such use as had been made of artificial light has been considered a mere makeshift. And although the photographer might be induced to pay more for ready, prepared plates and paper, he might decline to pay for light when he could get daylight for nothing. Furthermore, it was hard for him to be convinced that the cost of artificial light would be offset by any advantages it might possess

without incurring a considerable expense, as compared to the trifling cost of trying a new make of plates or paper.

When the production of motion-pictures became one of the great industries, involving millions of dollars in capital and output, the limitations caused by the variations and uncertainties of daylight were too serious a matter to be dismissed on mere preconceived ideas. Any method offering a fair chance to place the all-important item of illumination on a dependable basis was sure of a thorough trial.

Although individual photographers of the more progressive sort had amply demonstrated that the mercury-vapor lamp, invented and perfected about fourteen years ago by Dr. Peter Cooper Hewitt, was a satisfactory substitute for sunlight for every photographic operation, the great motion-picture studios had more at stake in obtaining a satisfactory artificial light in place of the natural product. There is this difference between the two classes of studios: the subject pays the professional photographer for taking his portrait, the "movie" producer pays his subjects for posing and, incidentally, the biggest salaries that are paid in the world. Taking chances of failure with the expenses running on at the rate of ten dollars a minute is not good economy. It is not at all astonishing, therefore, that some of the largest studios have more than a thousand Cooper Hewitt lamps in operation. That the results are fully equal, if not actually superior, to those obtained in the sun-lighted studios in point of artistic merit is sufficiently attested by the fact that the use of the artificial light has become virtually universal in the face of the keenest competition for excellence of product. For best lighting-effects, artificial lights are an absolute necessity.

Considering that the branch of indoor-photography doing ninety-percent of the business has generally adopted the mercury-vapor lamp, and that a considerable number of the portrait photographers whose work has placed them at the head of the profession have likewise accepted this form of artificial illumination as preferable to the glass skylight, it puzzles the layman to understand why it has not displaced daylight as completely as the dryplate has displaced its predecessor.

Can it be because of the cost to operate electric light? Then the photographer must set a very low value on his own time; for the cost of electric current will not average more than half a cent an exposure, and the additional work that can be done at times when daylight is not available should pay this a hundred if not a thousand fold — a point that requires no argument.





HANGING-ROCK FALLS

CHAS. M. DEBEVOISE

Is it because of the first cost of the Cooper Hewitt lamps? Then the photographer must be either a poor economist or doing business "on a shoe-string." The equipment used for years by one of the best-known professionals on Fifth Avenue, New York, can be purchased to-day for something less than \$400; and very satisfactory work is being turned out with outfits that cost no more than \$150. Aside from the cost of current, the expense of upkeep is not worth the accounting; it will not amount to one-percent a year on the investment.

Perhaps a vague notion that, being an electric apparatus, the lamp requires a degree of technical skill to operate it, may cause some to hesitate. If so, the notion is unwarranted. Turning the common electric-light switch is all there is to it, so far as the user is concerned. One of the most successful operators in the United States has a rack of six Cooper Hewitt tubes placed permanently at an angle on the side-wall of his studio, which is one of a suite of the average run of business-offices. When he makes a sitting, he turns on the lamps, pulls down the window-shades and poses his subject in such a position as to obtain the particular lighting-effect which he considers best adapted to the ease in hand. By experience, he has found the different positions required to produce all the typical lighting-effects, so that he can at once obtain any desired lighting by the simple arrangement of sitter and camera, with the aid possibly of a small, adjustable screen. With a little intelligent experimentation, lighting by these lamps can be re-

duced to a matter of infallible routine, and work turned out much more quickly, as well as of a more uniformly high character, than under the old-time skylight.

Thus, the objections that occur most readily appear to have no foundation in fact. On the other hand, there are several obvious and important advantages in the use of artificial light. First, of course, is the complete removal of the only remaining source of uncertainty in results; viz., the fluctuating power of daylight. This advantage is too evident to need lengthy discussion. The studio lighted by mercury-vapor lamps has the same advantage over the skylight that the steamship has over the sailing-vessel. Not even the high sensitiveness of the dryplate, as compared to the wet, was a greater boon to indoor photographic practice than the production of a complete substitute for sunlight.

Among the benefits accruing from the use of Cooper Hewitt light is the ability of the photographer to locate his studio in *any* building in which he can procure a suite of two or more business-offices of the regular type, or a ground-floor suite of rooms, if he desires, with greatly increased opportunity. The old-time skylighted attic was subject to a long list of constitutional ills. It was cold in winter and hot in summer. It was difficult of access, and as forbidding in aspect as the operating-room of a hospital. It required no end of curtains, and strings for pulling them, and was as prone to leak as a torn umbrella. It had to be built especially for the purpose, and at the photographer's expense.

# Substitutes for Platinum-Toning

FLORENCE



ALTHOUGH platinum-toning is of relatively recent date in comparison with gold-toning, it has nevertheless gained the larger number of adherents.

Its introduction was due partly to the circumstance that a black tone was at one time considered very modern, and partly to the fact that many professional photographers were accustomed to use for the gold-toning the not entirely unobjectionable combined toning- and fixing-bath, which led to many complaints regarding the lack of durability of the prints. As platinum was at that time comparatively cheap and the toning sure, and with careful work gave thoroughly durable prints, it gradually took the leading place.

The increase in the cost of platinum, however, gradually made the process quite expensive, so that ways and means were sought to obtain similar tone-results by other and cheaper methods. As far as printing-out papers are concerned — and they still take the lead — the desired result has not been easy to obtain. This is due to the necessity of using a gold-bath for toning, and its behavior towards the various photographic papers.

In all forms of toning, the final shade is made up of the coloring of the silver in the print and the added product of the toning-bath — gold, platinum, coloring-matter, etc. But the color of the silver print — that of the precipitate received in the toning-bath and corresponding to the length of time the print has remained in it — changes in the fixing-bath, and for this reason, as is generally known, it is extremely difficult to obtain black or deep brown-black tones.

There will naturally be the best prospect of success when these factors, i.e., the coloring of the silver-image and that of the precipitate of the toning-bath, are both dark. In the silver-print, this depends largely upon the nature of the emulsion as well as upon its thickness. The coloring of the added deposit — in baths of metallic salts — depends mainly upon the nature of the metal itself, and also upon the composition of the bath. Although platinum always gives a dark deposit, it appears to be extraordinarily variable in the gold-bath. Acid gold-baths give very warm tones, neutral baths give darker ones and alkaline baths the coldest tones. In the rhodan gold-bath, the final tone depends likewise, to a great degree, upon the composition of the bath.

But gold-baths are always inclined to produce blue as a final tone. Hence, with gold-toning we can obtain only a neutral black or an intense brown under the most favorable conditions, while blue-black or violet-black can be got very easily and surely. As above stated, the work is rendered much more difficult by the change of color in fixing. If this factor could be eliminated by a different mode of working, i.e., by toning *after* fixing, or by using a combined toning- and fixing-bath, the object would be much easier and surer of attainment.

Toning-baths that give a very dark, almost black tone on suitable paper have long been known; but that circumstance at first received very little attention. Later, more thought was given to the subject, and Professor Namias studied the conditions for obtaining black tones by the use of combined toning- and fixing-baths, and he came to the conclusion that the salts of lead played a very active part in the toning-bath. A print toned in a bath containing a strong solution of lead will consequently be composed of silver, gold and lead sulphate, to which eventually silver sulphate may be added. This view appears to be well founded, because the lead sulphate, in distinction from the silver sulphate, possesses a deep brown-black color which can readily be changed to a pure black by a brief gold-toning. This will be all the easier to obtain, the more the emulsion on the paper is inclined toward dark tones. To attain this object, Professor Namias does not recommend a so-called alkaline fixing-bath, but only *acid* toning- and fixing-baths with a high percentage of hypo, because in this way a quick and thorough fixing-out is assured, which is important for avoiding defects that would appear later.

A pure platinum-toning, without previous or subsequent gold-toning, generally gives a more or less brown shade rather than pure black. With the increasing use of gaslight paper instead of printing-out paper, every possible effort has been made to obtain this tone with the gaslight papers, so that they might be used in place of the printing-out papers with platinum-toning. The tone seems to be difficult to obtain with modified development where a large number of prints is to be made. Nevertheless, a very close approximation to it has been obtained by adjusting the emulsion to the peculiarities and mode of action of certain developers.

There are two ways to do this. The first aims



THE GLORY OF AN ENDING DAY

RICHARD PERTUCH

at producing directly, by developing the exposed emulsion, a precipitate of the desired tone. By the second method this result is obtained by producing a weak brown deposit which, in combination with the black silver-print, gives the brown-black tone. This latter, therefore, may be considered as a real toning-process.

The brown precipitate may be produced in various ways, and some of these can be classed as genuine toning-processes. They are little known on account of the toning-agents employed, which in many cases are the property of manufacturers of photographic papers.

These browns can also be produced in other ways, not from a silver-precipitate, and also without toning the black silver-print, but by a deposit formed in developing. In this case the brown precipitate can be produced only during development, and in the simplest way, from the substance of the developer itself.

It is a generally known fact that the so-called organic developers in a pure solution in water, i.e., without the addition of sodium sulphite, metabisulphite, etc., readily oxydize into intense-colored dyes. If this oxydizing process takes place during development, a portion of the dye in process of formation can readily be deposited on the image as it appears, which always shows a warm tone. From this fact we can obtain prac-

tically, on gaslight paper, tones quite similar to those of platinum.

Among the numerous developing agents only those are useful for this purpose which possess sufficient developing-power in an alkaline watery solution; and among these pyrocatechin holds first place as being thoroughly suitable. By this method, and with proper exposure, the print is developed with good details and sufficient rapidity to avoid color-fog. For this reason, it is becoming more and more popular, and may be considered as a practical substitute for matte printing-out paper and platinum-toning.

The durability of such prints appears to be just as satisfactory as that of ordinary black gaslight prints.—*Das Atelier*.

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## Rendering Values

SINCE we must have some basis to start from, we will assume that the transcript from Nature, the fine technical landscape-photograph, is the normal method of rendering values; for artistic purposes, the scale of gradations may either be shifted upwards into a high key, or moved downwards into a low key, and the values will have to be adjusted accordingly.—A. J. ANDERSON.



# Fog—Its Causes and Remedies

A. E. SWOYER



FOG of some sort is responsible for more spoiled negatives than any other factor, except incorrect exposure, and a knowledge of its several causes and remedies will prove of great assistance to every camerist.

First, of course, there is chemical fog, due to developer incorrectly compounded, with its resultant streaks and blotches; the use of prepared developers or the accurate following of the directions given for the compounding of suitable developers by the makers of the plates and papers used will naturally do away with this, although in some localities chemicals in solution in the water will cause trouble. If this is the case, relief may be found by using distilled — or rain — water.

Far more common is fog brought on by the use of developer that is either too warm or else exhausted. In the first case, the film is softened, the image flashes up very quickly and is covered almost immediately by a veil of fog. In the second, there is no immediate softening or sliding of the film, the image comes up slowly, with undue contrast, and a grayish fog appears when development is prolonged in order to bring out strength in the negative. It should be easy to keep the developer below the temperature of seventy degrees, even in summer, by the use of cracked ice or a water-bath; if neither is available, then the film should be hardened by the use of formalin in the developer, although in that case the character of the negative will be changed; as the temperature is not altered, the film being simply protected against the softening-effect, the negative will be "soft" and lack contrast. But if, through inadvertence, a plate is started in a partly exhausted solution, it may be saved by transferring to a bath of cool water as soon as the symptoms are noted, and as quickly thereafter as possible placing it in a fresh solution of normal strength. It is not difficult to distinguish between the two causes and to apply suitable remedies.

Another and somewhat similar form of fog is caused by the use of old plates, paper or films. The best way to avoid this is to use nothing but fresh goods for all important work, although for purposes not requiring absolutely perfect results some measure of success may be had with stale paper by considerably overexposing and developing in a solution well dosed with potassium bromide. If in doubt as to the age of the sensitized material, an inspection in the darkroom will

often show whether it is fit for use — brownish or iridescent borders, or a general appearance of "muddiness" all over, should be sufficient cause to warrant the rejection of the material.

Of all the sorts of fog arising from faults in the developing-process — in fact, the most prevalent of all causes — is the inspection of the negative by actinic light before it is fully fixed. Such fog may be noticeable only as a slight grayness on the otherwise clear margins, the rest of the negative apparently being as brilliant as usual. Nevertheless, the fog extends throughout the entire negative and degrades it, so that a print made from it cannot be perfect, no matter how satisfactory it may appear. Of course, the remedy is, never to expose a negative even to the light of the darkroom until it has been in the fixing-bath long enough for every vestige of the white "coating" to have disappeared. If, however, some negatives are fogged in this way, they may be greatly improved by immersion in a weak solution of potassium ferricyanide and hypo (Farmer's Reducer) until the grayness disappears. If necessary, they should then be washed thoroughly to remove all traces of hypo, and intensified. As usual, the best course is to avoid the trouble in the first place.

So much for the forms of fog usually caused by faulty manipulation or chemicals; but there are other sources that may be found either outside of or in the camera itself. In order to decide which, so that the cause may be traced and removed, it is sufficient to remember that plates fogged in the camera or plateholder will develop with clear edges, whereas those for which outside causes are responsible will be veiled clear to the edges. Of the outside causes, in addition to those mentioned in the preceding paragraphs, are those due to a careless exposure to light or to the use of an unsafe ruby-lamp — with a few possibilities for trouble in the way of defective plateholders.

Thus, if the fog shows up all over, and is not due to chemicals or development, it would appear that the plate had been exposed to actinic light either before or after its insertion in the camera — and more care in the future implied. Fog produced by the ruby-lamp is not usually so dense as that just referred to. Quite often it does not extend all over the plate, but extends in a clearly defined strip across one edge — due to the fact that the rim of the developing-tray protected a portion of the negative, and is an almost certain in-



dication that the trouble is with the lamp. To make assurance doubly sure, a fresh plate should be exposed to the rays of the lamp — in the dark-room, of course, for the usual period and at the regular distance for developing. If, after development, this test-exposure shows a trace of fog, then steps should at once be taken to make the lamp safe either by inserting extra glasses or by substituting others of a darker shade. Or, if the fog is in the form of streaks that extend across the margin — showing the cause to be outside of camera or plateholder — there may be leakage of actinic light into the dark-room.

The plateholder, previously mentioned, is not likely to be a cause of trouble; nevertheless, it is capable to produce at least three varieties of fog. The first and most common of these is not the fault of the holder, but evidence of carelessness on the part of the photographer — this is the diagonal strip often seen running across one end of a plate, and is caused by inserting the slide corner-first instead of straight across. It is only fair to their makers to say that certain holders are so made that the slide may be inserted in any way without harm; but unless the worker is sure that he has one of that sort, he had better slip in the entire edge at the same

time. One end of the plate may also be fogged if the light-trap of the holder is defective; but this form may be distinguished from the case just mentioned because it usually extends straight across instead of diagonally, or else appears as a series of jagged triangles extending straight into the plate —

remedy, unless the amateur is an expert cabinet-maker and feels qualified to mend it, new plateholder! The third form of fog may be caused by an old holder whose sides have become more or less sprung, or by a slide not perfectly light-proof; but such cases are so rare, except with the extremely careless, that they may almost be disregarded.

It should be apparent that most of the forms of fog previously mentioned have been due, more or less, to the carelessness or lack of thought of the operator;

but in the camera itself may lie troubles to vex even the most careful. There may be minute holes in the bellows, admitting light only in certain positions of the camera and extensions of the bellows; it may have cracked slightly along the folds, due to age or drying out of the leather. Perhaps the shutter sticks or does not fully close. It is also possible that the black paint may have worn from some of the inner surfaces, which reflect light entering through the



MY FRONT-DOOR STEP

WM. LUDLUM, JR.



BY THE WAYSIDE

RUDOLF EICKEMEYER, JR.

lens back onto the plate. The plateholders or the camera-back may not fit tightly, so that light leaks in around the edges; or, in the case of a roll-film camera, the ruby window in the back, through which the film-numbers are read, may not be sufficiently dark in color. These are the most probable causes. Naturally, there are special cases without limit; but if one fails to determine the cause of trouble along the lines previously mentioned, it is pretty safe to assume that a journey of the camera to the repair-man — or, better yet, to the makers — will be the easiest method of discovery and repair.

Fortunately, virtually all the ordinary defects in the camera may be quite easily detected and measures taken to remedy them. For example, if the negative gives the indications of trouble with the camera, and not with the plateholder or in development — a method of such determination having previously been outlined — simply remove the back of the camera, close the shutter, and, with all outside illumination cut off with a focusing-cloth, point the camera at some bright light, when any leak in the bellows will be noticeable, and may be temporarily repaired with adhesive plaster until such time as the camera may be spared long enough to have a new bellows fitted. The same test may be used for a defective

shutter, although in this case the shutter itself should be operated several times in order to give it the opportunity to stick, if so inclined — with true human perversity, it is likely to work perfectly while under test, no matter how badly it behaves at other times. Should it stick or fail to close, a tiny quantity of powdered graphite applied to the leaves may help matters, as may a drop of the finest machine-oil put on the sliding portion of the pneumatic valves — but, out of consideration for the pocketbook, one should not attempt to take the shutter apart nor put oil on the blades. Either course will be likely to ruin it entirely, inasmuch as a good shutter is a delicate piece of mechanism requiring adjustment by an expert, whereas if one oils the leaves, and they happen to be of rubber — well? In fact, with all bellows or shutter-troubles, time and money will be saved by shipping the camera at once to the makers.

To test for poorly fitting plateholders, loose backs and similar matters, the procedure just given should be followed, except that the back of the camera should be on and the shutter opened, while, with extraneous light shut off by a focusing-cloth, one looks into the camera through the lens; then, if the room is lighted, any leakage of light into the camera may be detected



almost instantly. To remedy such troubles, a narrow strip of black velvet should be used to pad out the parts that fail to join closely. If, however, the trouble is in but one of the plate-holders, and not in the camera at all, it is generally safer and cheaper, in the long run, to discard that holder entirely.

The remaining and common cause of trouble — the black paint being worn from spots in the interior of the camera — may readily be detected by inspection. The remedy is a fine brush and either some ordinary “dead-black” paint or the special preparation sold by dealers for the purpose. Or, if one uses a roll-film camera, and occasionally finds a dark, circular spot of fog in the center of the negative, it may be that the little ruby door in the back of the camera has proved too “weak” to protect the film if the camera has been permitted to lie closed in bright light. The appearance of this light-struck spot is similar to that caused by a shutter which fails to close properly. It may be distinguished readily, however, because its edges are sharply defined and there is usually some trace of the film-number

printing through. The cure is a darker bit of celluloid, or greater care in not exposing the closed camera to strong light.

One other form of fog is found by roll-film users exclusively. It extends in a jagged strip along the film-roll and is caused by a failure to wind the protective paper on tightly. The cure is to tighten the spring in the bracket holding the film, or else to use care to see that the camera is unloaded in subdued light and that the paper is wound tightly, and sealed with the paper-sticker.

So we come to the end of the list; but not to the end of our fog-troubles, for every camera-user may find a new species not included in this article. Nevertheless, when fog occurs, if the photographer will decide first, by the tests given, whether the trouble lies in the camera or outside of it, and then by a process of elimination work down to the exact source, about nine-tenths of fog-troubles may be eliminated; whereas, if the user will combine some reasoning-power with the methods herein outlined, the remaining one percent may be speedily disposed of — and if so, then the purpose of the writer has been attained.



# Optical Glass: a Brief Historical Review



THOUGH photography is not responsible for the introduction of optical glass, it affected its manufacture to a considerable extent, as it imposed special conditions that otherwise need not have been considered. Different varieties of glass are needed for use in different instruments, and photography has demanded a much higher degree of chromatic correction than was required for other purposes, whereas the necessity to obtain a well-defined image over a large field has imposed a fresh condition requiring other special types of glasses. The all-important distinction between optical and other ordinary glass is, however, not merely one of composition, but one of quality; it must be perfectly homogeneous and free of striæ. The method of producing such glass was discovered about 1807, and its successful manufacture accomplished about 1814, Guinand, a Swiss, being credited with the first conception of the method, and Fraunhofer, a Bavarian, with the development of its application. Through Guinand's sons the secret of the method of manufacture found its way into France and eventually into England. The manufacture of optical glass in the former country began to be important about 1829, and in England (by Chance Brothers) about 1848, and these two countries rapidly obtained the lead in the industry. Prior to the discovery of the right method of making optical glass, opticians had to be content with merely selecting the best samples of glass they could find from material made in ordinary fashion, in consequence of which only small lenses could be produced. The discovery of the right method of manufacture enabled Fraunhofer to produce lenses of nearly 10 inches in diameter, whereas the further improvements made by Messrs. Chance Brothers, in England, led to the production of 29-inch lenses in 1855.

While these manufacturing-developments were taking place, various experiments were being made in respect to the composition of glass. Just about the time when Fraunhofer succeeded in mastering the mechanical details of optical glass-making, he discovered a method of testing the optical qualities of glasses of different composition, and of expressing those qualities in figures. In 1804 Wollaston discovered the black lines in the solar spectrum, which were afterwards called Fraunhofer-lines. In 1814 Fraunhofer investigated the same subject much more closely, and, with the aid of these lines, contrived his method of spectroscopically testing and definitely de-

scribing the optical qualities of glass, whereupon he promptly set to work to produce and examine new varieties. It should be understood that up to this time only two varieties were in use for optical purposes, crown and flint glass, and although both were used for the purpose of producing achromatic lenses, the manner in which they were used was more or less empirical in the absence of exact measurements of their optical qualities. With regard to the discovery that a combination of crown and flint lenses could be achromatic, Dolland is generally assumed to have been the originator, in 1757, though Chester Moor Hall produced the first achromatic telescope in 1733. Properly, the credit belongs to Hall; but he was a gentleman of independent means, living in Essex, and not in any way interested in the matter of precedent. He was a lawyer and mathematician, not an optician, and appears to have been quite content to let Dolland reap the credit of being the first discoverer of the principle and the advantage of securing the patent rights. Out of this discovery eventually grew a demand for more varieties of glass, for with simple crown and flint only a limited correction was possible. At first the only need was for visual correction, that is the bringing together of the more visible rays of the spectrum. Photography, when it appeared, demanded more. It wanted brought together both the visible rays for focusing-purposes, and the invisible actinic rays, so that visual focusing should suffice to produce a sharp photographic result. Color-photography has made further demands, as it requires perfect correction for the red, green and blue-violet rays, together with the more readily visible ones. Practically, color-work wants the lens to be corrected for the whole of the visible spectrum, and such a result cannot be brought about unless we have glasses that differ as regards their effect in the same proportion throughout the spectrum. Ordinary crown and flint do not do so, and therefore with them only a limited series of colors can be brought together. Hence, it was necessary to search for other kinds of glass possessing the required proportionate dispersion.

Fraunhofer, having found a means to test glass, set about this task; but his early death stopped further progress. Here it may be as well to deal briefly with the composition of glass. Speaking generally, glass is essentially a compound of an acid, an alkali and a metal. The usable acids appear to be limited to silicic, boric and phosphoric, whereas the possible metals are





THE WATER-NYMPH  
KATHARINE BRUCHERSEIFER



numerous. Ordinary crown glass is a silicate of soda and calcium; ordinary flint glass a silicate of potash and lead; whereas an intermediate type contains barium in place of lead or calcium. Barium (or baryta) has been used in place of lead since 1830, not especially for its optical qualities, but merely as a substitute for the more expensive lead. Flint glass (or crystal glass) was introduced in England in the seventeenth century, before there was any optical demand, and lead was a constituent of glass in very early ages, before the lead-potash or flint combination was invented. We may look upon crown as ordinary quality of glass, and flint as an extra fine quality of glass, devised especially for high-class table-ware. It was not until long after the introduction of flint glass that its optical qualities became recognized or of any importance.

The deficiencies of flint and crown achromatic combinations were recognized early, and attempts were made to substitute liquid lenses for flint. According to Coddington, Dr. Blair used a lens filled with solutions of ammoniacal and mercurial salts with very great success, whereas Professor Barlow used a lens filled with "liquid sulphuret of carbon," but, obviously, the problem could be solved satisfactorily only with glass. Fraunhofer made and tried various kinds of crown and flint glass, including a boro-silicate flint in which both boric and silicic acid were combined with lead and alkali; also a crown glass in which probably potash was used. About the time of Fraunhofer's death—or soon after—Faraday also produced a boro-silicate flint glass. A Frenchman, Maes, produced a zinc crown, apparently a boro-silicate zinc. Glasses containing fluorine and thallium were also tried in France, while in England Harcourt and Stokes experimented with boro-phosphate glasses, and also discovered the fact that boric acid lengthens the red end of the spectrum. Dr. Hopkinson followed their example in this country, while a magnesia crown glass was produced by Schoeder; but the difficulties and expense of the work handicapped and discouraged all experimenters on a small scale, and little real progress was made. It is evident, however, that the possibilities of various glasses were realized and a fair variety tried, whereas all that was wanted for further progress was the necessary capital and means for carrying out a full investigation. There is no reason but inertia why this should not have been done in England; but the German government was far-seeing. When Abbe and Schott showed their willingness to undertake the work, at Jena, a liberal government-grant enabled them to carry the matter through, and as the result of a vast number of

trials and tests they produced glasses well adapted to the production of achromatised lenses.

In the meantime, another requirement had cropped up. In 1829 Coddington published the optical condition governing the production of flat-field anastigmats, the importance of which was manifested later, when photographic lenses became necessities. Fourteen years afterwards, Petzval, of Vienna, rediscovered this condition—or else followed up Coddington's work, it is not clear which—then known as the Petzval condition. This condition, however, could not possibly be fulfilled with ordinary flint and crown glass, which fact both Petzval and Von Seidel pointed out. The thing looked as if it would always be impossible, and no attempt was made to conquer the difficulty, until Abbe and Schott began their work. They tackled this problem as well as that of producing glasses for more perfect achromatic correction, and solved both more or less completely. Thus virtually all the requirements of the optician in regard to material were met, and big developments in optical apparatus became possible. The example of Abbe and Schott was followed closely by Messrs. Chance in this country, also by M. Mantois in Paris, and at the present day optical glasses of great variety are obtainable. It should be noted that Fraunhofer should fairly receive the lion's share of the credit due to those who have helped to develop optical glass. If he had not died very young, he would probably have seen the thing through. The later work has been much simpler than his, and has depended mainly on the provision of money and time sufficient to complete a very laborious and more or less mechanical task. Virtually the same materials are used now as were used by him and by the other early workers, and the main result is that their use has been systematized and reduced to formulæ, while manufacturing methods have naturally advanced and improved very materially.



THE painter who creates a landscape "out of his head," in nine times out of ten finds it to be a reconstruction of forms already used by him, or the figure-painter of the Monticelli-Diaz type merely supplies through the imagination his idea of form and color, and presents us with something original, *founded on fact*. They are, therefore, not idealists in the true sense of creating a type or expressing a general conception. These people occupying a distinct and important position in art should be furnished with a fitting term of designation in art's nomenclature.—FROM "THE CONCEPTION OF ART," by H. R. POORE.





WINTER IN THE BRONX

DR. D. J. RUZICKA

## The Printing-Medium

**I**N choosing a printing-medium, the first quality to be required is permanence, for it is assumed that, if the worker has given time and thought to the production of a work of art, he will not want it to disappear in the course of a few years; whereas if he sells it, honesty demands that it be as stable as possible. There are certain printing-papers which can be depended on for permanence, and others which will give results that are permanent if care has been taken in their production, but not otherwise, whereas some are absolutely unstable in the best of circumstances. A black and white platinum print on linen paper or vellum may be relied on for permanence, and the same is true of a carbon or gum print in a stable color; but a gum print superposed on a black platinum will be durable in the same circumstances. Unfortunately, we have no means to know what pigments are used in making carbon paper; but the various color-manufacturers will furnish information about permanent pigments for use in the gum or gum-platinum process. If mercury is used to produce brown tones on

platinum paper the permanence of the print becomes doubtful, though a permanent warm black may be obtained by using the developer hot, this treatment also serving to reduce contrast. In most cases the best effect will be attained by making the print in a warm or cold black or a brown, other colors not being desirable, and these tones are readily obtained in permanent form on platinum, carbon or gum paper, but a stable warm brown may be obtained on bromide paper. It should be noted, however, that no black and white print on bromide or gaslight paper can be considered absolutely permanent, despite the claims of the manufacturers, and this is true of any color except one that is obtained by the redevelopment process, in which potassium ferri-eyanide, potassium bromide and sodium sulphide, or an equivalent, are used. Albumen paper gives very beautiful results, especially in the lower portion of the scale; and if the prints are properly toned, fixed and washed, they may be relied on to remain in good condition; but a failure in any of these processes will result in fugitiveness.—PAUL LEWIS ANDERSON, in "PICTORIAL LANDSCAPE-PHOTOGRAPHY."



# How To Make a Holder for a Wratten Filter

LEHMAN WENDELL



**P**ANCHROMATIC plates, or plates sensitive to all colors, are being used more and more, and they would be still more popular among amateur photographers if the cost of the necessary accessories were less. At least one filter must be used with panchromatic plates, though a set of three is to be recommended. A 2-inch filter is listed at \$1.40. A holder for this costs \$2.50. It is the purpose of this article to show how this \$2.50 may be saved by making a home-made holder which serves the purpose admirably and which can be used for any additional filters that the photographer may later purchase. The holder can of course be varied so as to fit any shutter, but the one herein described is made to fit a Compound shutter.

The holder is made of a good quality bristol-board, a paper used largely by printers and artists. It can be had at any stationery-store. A rubber-washer, such as is used in coupling a garden-hose, and a short piece of wire will also be needed. Let us suppose that the holder is for a 2-inch filter.

First cut the bristol-board to the shape pictured in Fig. 1. The dotted lines show where the paper is to be cut lightly and then folded. As will be seen, the two flaps, a, a, are made just wide enough to meet in the center when folded. This not only presents a better appearance than if they were made narrower, but it also serves to make the holder more rigid by providing a double

thickness of paper. Two holes, b, b, are cut out; it is evident that they are to come in line with the lens of the camera. Another cut-out, c, is also provided; this is made to facilitate the removal of the filter, which is done by inserting the point of a pencil and pushing out the filter so that the free end may be grasped by the fingers. Now bend the paper at the dotted lines, then moisten the two flaps, a, a, with glue and press to place. While doing this it is well to slip the filter into place, as the whole may then be placed under a weight while drying.

Next bend the wire as shown in the illustration, Fig. 2. Notice that there is an outward curve to the wire. Now, by means of some short lantern-slide binding-strips, glue the wire to place. Next cover the three edges of the holder (bottom

and two sides) with binding-strips, just as if you were binding a lantern-slide, and then glue a black paper over the front and back of the holder. Next glue the rubber-washer over the lens-opening. This completes the holder, and by hanging it over the dial of the shutter and allowing the rubber-washer to slip into the lens-barrel the holder will be found to fit snugly and rigidly.

THE unsophisticated amateur, ambitious to improve his work, should be sure that the standard he wishes to reach is one approved by the highest authority.

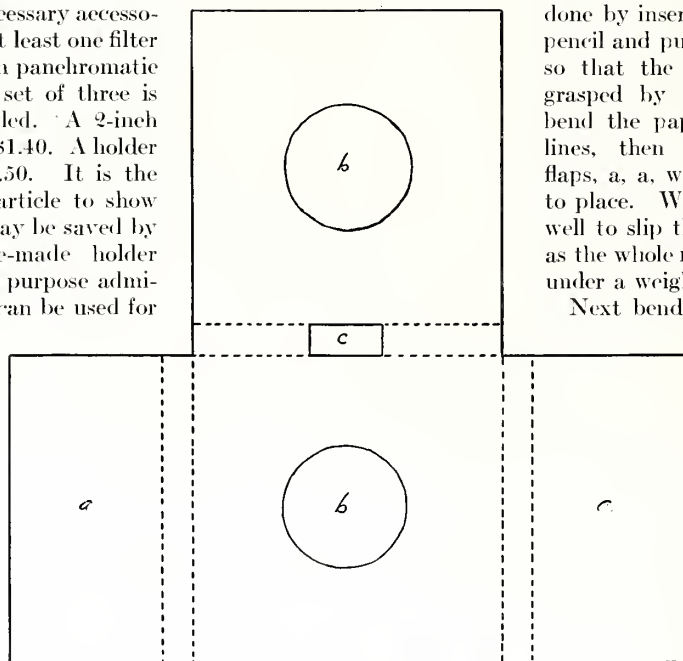


FIG. 1

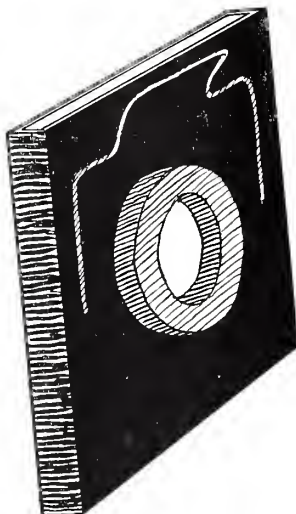


FIG. 2



WINTER-EVENING

DR. F. F. SORNBERGER

## Burson Tries a Dangerous Scheme

MICHAEL GROSS

**T**HE Home Borough Development Company owed its existence to Burson. It sprang into being simultaneously with the "scheme" of which it was the nucleus. Burson, determined to put his hard-earned and costly knowledge of photography to use, had tried in vain to earn money with his camera. Then the "scheme" suddenly came into his head. It was magnificent in its very simplicity. Burson became The Home Borough Development Company. He had a gilt badge made with the name in blue enamel letters and the words "OFFICIAL PHOTOGRAPHER" engraved across the top. Then, one bright morning, he pinned the badge to the lapel of his coat, picked up his camera and things and started out.

The first place he entered was the delicatessen store around the corner. "Good morning, Mr. Schultze," he greeted the proprietor; "I've come here this morning to take a photograph of your store."

"I don't want the store's pitcher took," Mr. Schultze told him; "I've got no money to throw

away on pitchers" — which was just the answer Burson expected. Practically, the same words had served to turn him away on his last visit, but that was before he had thought of the "scheme." Now he merely smiled and went on talking. "You don't understand, Mr. Schultze," he explained; "this isn't going to cost you one cent. Do you see this badge?" — pointing to it — "well; I've been appointed official photographer for the Home Borough Development Company."

"Und vat are dey?" Mr. Schultze asked.

"The company has been formed," Burson went on airily, "to show merchants in near-by towns the advantages offered by this borough. We want to get a photograph of the leading store in every line. The company will bind these photographs in a book and then distribute the books to out-of-town merchants, to get them to come here."

Schultze became interested. "Vell, vy did dey pick my store out?" he demanded.

"I'll tell you," Burson said. "While it is true that your store is n't by any means the largest in the neighborhood, still the company decided it

was the most representative; in other words, it had the finest window-display, the freshest goods and — with a smile — “the most efficient proprietor.”

The subtle flattery made its appeal, and Schultze brightened up perceptibly. “And you say it ain’t going to cost noddin’?” he queried.

“Not a red cent,” Burson assured him.

“All right den, I’m villin’,” Schultze said; “but chust wait a minute ’till I fix up de show-vinder a little bit. Und I vill tell Katrinka to come out. Ve’ll have a regular family grouper, eh?” he added, slapping Burson on the shoulder good-naturedly.

Burson chuckled as Schultze disappeared through the curtains that shut off the rear of the store. “If they all fall as easy as this,” he said to himself, “I’m a made man.”

In a few minutes Schultze reappeared, followed by his wife, Katrinka. They commenced arranging the frankfurters, wursts, cheeses and salads as artistically as such things can ever be laid out in a show-window. Then Mrs. Schultze carefully wiped off the plate-glass front, helped her husband into a clean white apron, donned one herself and they were ready. Meanwhile Burson had set up his camera in front of the store, and, after posing the Schultzes, he snapped away.

“Thank you, Mr. Schultze,” Burson said a few minutes later, as he packed his outfit and prepared to depart.

“Vone minute” — Mr. Schultze stopped him — “can’t I see a copy of de book ven it is finished?”

Burson shook his head. “I’m afraid not,” he said, “you see I’m only the photographer. I have nothing at all to do with putting the book together. But I’ll tell you what I’ll do,” he went on, lowering his voice, “you’ve treated me pretty well, and before I send the picture off, I’ll drop around and show it to you.”

“Dat’ll be fine,” Mr. Schultze said, “much obliged.”

“Guess I’ll test out the whole scheme on Schultze before I try it on any one else,” he mused on the way home; “if I sell to him then I’ll know I’m on the right track.” Accordingly he hurried to his room, developed the plate and the next morning finished up two prints from it.

“I’ve got those photographs here,” he announced on entering Schultze’s place a little while later — and both the Schultzes came forward hurriedly. Burson drew the two pictures out of an envelope and then looked around cautiously. “Here they are,” he finally said, handing them to Mr. Schultze, “pass them right back to me when you’re through.” They were really fine pictures, the specially decorated windows and the new aprons having taken finely,

giving the photographs, in the eyes of Mr. Schultze, an enhanced value.

“Dey are certainly goot,” came from the Schultzes in chorus; and then Mr. Schultze asked anxiously — “Is dere any vay I can get one or two of these?”

Burson threw up his hands in evident horror. “I could n’t think of such a thing,” he assured Schultze, “it would be as much as my job is worth if the company caught me giving any of these pictures away.”

“Who said anyding about *giffing* dem away?” Mr. Schultze demanded; “I’d be villing to pay you for dem.” Burson shook his head.

“Nobody vill ever know de difference,” Mr. Schultze pleaded, “I’ll pay you vatefer you dink de pitchers are wort, and who’ll be de viser?”

Burson smiled to himself. The human trait that he had relied on for the success of his scheme was proving itself most admirably. Now that Schultze thought there was no possible chance to secure the photographs, they suddenly became highly desirable. Heretofore it had been Burson who had to plead if he wanted to sell his pictures. Now it was the customer who was doing the coaxing. Burson waited a few moments, to increase Schultze’s eagerness; then he spoke:

“Listen, Schultze,” he said, drawing close, as if in fear of being overheard; “I like you and I’m going to let you have these two photographs for a dollar. But only on condition that you won’t show them around.”

And then Schultze — the same Schultze who only the week before had remained obdurate when Burson pleaded for a chance to make pictures of the store for twenty-five cents each — extracted a dollar from the cash-register, passed it over to Burson and received the two pictures he coveted. “Much obliged, Mr. Burson,” he said, as he put them into a drawer of the desk, “und you can rest easy. Nobody vill see dese pitchers. Dey vill be sent ofer to mine and Katrinka’s people on the odder side in a few days.”

Burson said good-by and went straight home. He loaded up a dozen plates, and ten minutes later was back on the street again. Working the same scheme that Schultze had proved such an easy victim for, he succeeded in getting nine merchants to dress up themselves, their families and their store-windows and have a picture taken. Burson waited patiently in each instance, knowing that the more artistically the window was arranged, and the handsomer the group in front of the door looked, the more would the proprietor coax for a chance to buy the pictures — and Burson was right.





RAINY-NIGHT VISTA  
W. R. BRADFORD



The day after he had exposed the nine plates, he came around with the finished photographs, and condescended to take a dollar from each merchant for two pictures of their store. He had collected eight dollars, and had only two pictures left — those showing the store of the neighborhood butcher. He entered this last place confident that he would make a clean sweep. The butcher, somehow, seemed to know just what Burson had come for. "Got those pictures?" he asked, and Burson nodded. "How much do you want for them?" was the next question, and Burson pretended to be very much surprised.

"Why, they're not for sale," he said, "I just came around to show them to you, as I promised I would."

"Oh, I guess you'd sell me two if I coaxed you hard enough," the butcher replied, with a peculiar smile on his face.

Burson, flushed with his previous successes, failed to notice the smile, and the butcher continued:

"By the way; what company did you say you represented?" he asked.

"The Borough Development Company," Burson answered, "and here's my badge to prove it."

"Oh, that's all right," the butcher assured him; "I just forgot the name for the moment. Now let's get down to business. Is n't there some way I can get a couple of those pictures? I really want them."

"This was the proper spirit at last," Burson thought, and he finally agreed to sell the two photographs for a dollar. The butcher received them and passed over a bill. Burson reached out and took it. As he did he felt a hand on his shoulder, and turned — to face a policeman. "Better come along with me, son," the policeman said. "Guess you better come along, too, Tom," he added to the butcher.

The events of the next half hour were like some horrible nightmare to Burson. The only thing he remembered was being led in front of a railing behind which sat a gray-haired, stern-looking man who, Burson thought, must be the judge. "What's the charge?" he asked. Burson was too dazed to listen closely, but he managed to hear snatches of the conversation now and then — "money under false pretenses" — "impersonating an officer of a company" — and other meaningless phrases.

Finally, the policeman ceased talking and the butcher was called on to testify. In a few minutes, he had told his story, and then Burson was brought forward. The judge stood up and commenced to talk to him. He said something

about "the extreme youth of the prisoner," and "reasonably good value having been given for the money" and other things that Burson only dimly understood. The sentence the judge concluded his speech with, however, seared its way into Burson's brain with startling distinctness. It was — "You are fined ten dollars."

Burson drew out the nine dollars he had collected that day, added to it the dollar he had received from Schultze the day before and passed the entire amount over to the clerk seated alongside the judge. Then he was allowed to go; and he stumbled out into the dark, dark night, *sans* scheme, *sans* money, *sans* everything.



THE apprehension of pure beauty, which may appear to be an exercise above the reach of reason, depends, after all, upon taste, and leaves the case, at any rate, in the *ignus fatuus* of personal preference. Such combination of colors as is accounted beautiful to one, is abhorrent to another. The music of the Chinese or the South-Sea Islanders is a distress to the votaries of the modern school of opera, and, conversely, Wagner is doubtless as incomprehensible to the Chinese and Malay as to Tolstoy, who derided it. In the realm of absolute pure beauty, taste will always be a subverting factor in any hypothesis. When, however, we bring our attention to the intellectual apprehension of art, the question of beauty opens to analysis; and in many cases, markedly in those where positive ugliness is the subject, it is found that art's demand for pleasure is satisfied wholly by the means of expression. If these fit adequately the character of its ugliness, so that the subject is made explicitly and pronouncedly so, the intellectuality of the artist in its discernment of character is our pleasure. But why deceive ourselves into the supposition that the work is beautiful? Could we gaze upon Rodin's aged strumpet, or MacCameron's "Absinthe-Drinkers," groping in the last stages of paranoia, and exclaim, "How beautiful!" Is it not time that we used terms for our ideas that express them, and thereby obtain a revelation of truth? Let the ejaculation be, "How characterful!" and acknowledgment made that the means employed, which technically express it, are masterly, and that constructively the work exploits the principles of art. These are added reasons for a sane pleasure in such works; and the three reasons of character, of technique and construction are what qualify them as art, despite Tolstoy's contention that only such works as can show a moral basis can be considered art. — From "THE CONCEPTION OF ART," by HENRY R. POORE.



## EDITORIAL



### Famous Portraits in American Art-Galleries

THERE is no question that students in portrait-photography appreciate the value of the works of the great portrait-painters as sources of inspiration. Photographers eager to behold and admire examples of portraiture by celebrated artists, but who live a great distance from the home of the Metropolitan Museum of Art, seem to think that there are no pictures worthy of note outside of Greater New York. The Editor referred recently to the numerous art-galleries scattered throughout the United States that contain worthy examples of the great masters in art. He now takes pleasure in stating just where such pictures may be found.

Of course, the serious student will hail with delight an opportunity to visit the Metropolitan Museum of Art, New York, now one of the leading picture-galleries of the world. Here are assembled portraits of great distinction, and of undisputed genuineness, by the great masters of Europe. Among the private art-collections of the Metropolis, the one owned by Henry C. Frick is easily the first — since those of Altman and Morgan have been merged with the Metropolitan. Philadelphia is probably unrivaled, among American cities, as possessing the most valuable private collections. Her eminent citizen, Mr. John G. Johnson, is the happy possessor of authenticated masterpieces by Rembrandt (12), Bol, Hals (2), Rubens (7), Van Dyck (5), Cranach (3), Tintoretto, Murillo, Reynolds (5), Gainsborough (6), Romney (2), Hoppner, Raeburn, Whistler (2), and Meissonier — mostly portraits. What a feast! The Widener and Elkins collections are likewise rich in portraits by the old masters, and John Howard McFadden owns many fine examples of the early British school. This splendid collection was on exhibition for several months, last autumn, at the Pennsylvania Academy of the Fine Arts. The Academy has a number of representative examples of the early English and American schools and, certainly, the finest collection of Stuarts — fourteen, including the famous Lansdowne portrait of George Washington — in the United States.

Baltimore, for many years, has been proud of its Walters Gallery of Paintings, notable among which are portraits by Tintoretto, Raphael,

Rubens (2), Holbein (3), Rembrandt (2), Hals, Bol, Van Dyck (3), Reynolds (2), Gainsborough, Hogarth, Romney (2), Hoppner, Raeburn (2), Lely (2), Stuart, Le Brun, David and Meissonier.

The Art-Institute of Chicago boasts a large collection of pictures by artists of various schools, among which are admirable portraits by Rembrandt, Hals, Rubens, Van Dyck, Ter Borch, (Terburg), Maes, Netscher, Romney, West, Stuart, Copley, Healy, Bonnat, Zorn, Melchers and Sargent. During the summer, valuable loan-exhibitions are held at the Institute, where masterpieces of priceless value may be seen.

In St. Louis, the Bixby collection is the most important, and ranks high among the private picture-galleries of the country. Charles Lang Freer's collection of European art takes the lead in Detroit. Mr. Freer also owns what connoisseurs regard as the finest and largest collection of pictures by James McNeill Whistler, comprising over one hundred of this artist's finest works. This priceless collection was presented by Mr. Freer, recently, to the National Museum at Washington, where it can now be seen. The Detroit Art Museum is young, but active and ambitious, and, before long, will astonish the country by the extent and importance of its art-treasures. It owns already many fine pictures by eminent American and European artists.

The youngest art-center in the United States is Cleveland. Its beautiful museum was dedicated last June, and opened its doors to the general public with a notable display of American and European art. Of particular interest to the student in portraiture, there, are superb portraits by Rembrandt, Hals, Ter Borch, Goya, Allori, Van Dyck, Reynolds, Raeburn, Romney, Gainsborough, Hogarth, Lawrence, Copley, Stuart, West, Healy and Fuller, which, though lent partly by private individuals, are likely to remain in the museum undisturbed.

Boston, the great educational center, has a large and magnificent art-museum — without a peer in America — which, however, lacks a representative collection of paintings and statuary. Nevertheless, it owns admirable portraits by Velasquez, Moroni, Solario, Cranach, Rembrandt, Hals, Van Dyck, Reynolds, Gainsborough, Raeburn, Stuart (13), Copley (8), West, Healy and Whistler. But by far the most valuable group of portraits by great masters is



owned by Boston's premier art-connoisseur, Mrs. John Lowell Gardner. Her famous Venetian Palace, filled with art-treasures of every description, contains, among other pictures by the great masters, portraits by Dürer, Holbein (2), Mino da Fiesole, Velasquez (2), Masaccio, Raphael, Titian, Pollajuolo, Tintoretto, Polidoro, Moroni, Del Piombo, Bronzino, Moro, Rubens, Rembrandt (2), Sustermans, Van Dyck and, though modern, a magnificent portrait by Degas. The Venetian Palace is open to the public at stated periods during the year.

The National Capital has two public art-museums — the Corcoran Gallery of Art and the United States National Museum (under the direction of the Smithsonian Institution). The former contains over three hundred modern paintings of exceptional merit by American and European artists, and is one of the sights of Washington. The latter contains among other numerous works of art an important and growing collection of paintings by European masters, together with fine examples of early and present American artists. Some of the museum's finest portraits are by Reynolds, Romney, Hoppner and Lawrence. Admirers of the genius of James McNeill Whistler will find here a wonderful collection of pictures by that artist, presented to the museum by Charles Lang Freer, of Detroit.

Loan-collections of great importance, containing portraits by distinguished artists, are frequently on view, so that a visit to the Nation's chief art-repository will always repay the effort.

The Toledo Museum of Art has reason to be proud of the progress it has made in acquiring genuine and exemplary works of the great painters. Among the most valued possessions are portraits by Velasquez, Rembrandt, Bol, Hals, Van Dyck, Reynolds, Raeburn, Stuart, Copley and West, well worthy of visits by the people of Ohio and strangers that pass through the city.

Although, obviously, access to the homes of the owners of valuable art-collections is denied to the general public, the honest and respectable picture-lover may obtain admission by application through the proper channels. Sad to relate, there have been instances where the hospitality of an art-patron has been grossly abused by persons who proved to be vandals or kleptomaniacs. Small wonder, therefore, that the owner of valuable works of art will restrict the inspection of his treasures to intimate friends and distinguished guests, unless the stranger seeking the privilege is vouched for by discriminating friends of the prospective host, or other persons of adequate responsibility; and, in truth, the owner of celebrated pictures would rather show them to appreciative strangers than to indifferent acquaintances.

## John J. Enneking

ENNEKING, the genial landscape painter, is no more. He has gone to the land that is filled with glories far greater than any that inspired his brush on this terrestrial sphere. While living, he was never wholly satisfied with his own manner of interpreting the subtle beauties of nature — beautiful, growing and admired as it was — even in his latter years, when portraying the exquisite mystery of budding spring or evanescent autumn. He longed for greater powers to understand and to express through his medium Nature's glorious visions. Yet he comprehended the language of the divine Creator, to the extent that he realized the inadequacy of the artist's means of expression, and he continued to search assiduously for more light to illumine his path toward his coveted goal. His art was his life, his inspiration, his religion.

And Enneking, perhaps more than any painter I can name, appreciated the power and resources of photography as it served the ends of the true artist. He had no interest, whatever, in photography as a purely mechanical activity, nor did he stop at a photographer's show-case to note the progress of the art. He was too busy a man, and too much absorbed with more serious problems. When his attention was directed to some really meritorious work — work that indicated the creative ability of the photographer, more particularly that of the amateur, who, by his superior advantages of education and opportunity, demonstrated that photography should be classed with the fine arts — Enneking displayed an interest that finally culminated in enthusiasm. He discovered that the artist-photographer, with his virtually unlimited scope of observation, his artistic intuition, genuine feeling and technical skill, could produce pictures of striking originality and beauty, making him forget the pattering easel-artist, fettered by tradition, convention and dry bones.

Thus Enneking, in his occasional visits to the offices of PHOTO-ERA, would take genuine delight in studying the work of such true photopictorialists as White, Macnaughtan, Anderson, Struss, Vandervelde, Krause and Davis, and the portraits of master-photographers — Garo, Goldensky, MacDonald and others. Indeed, he did not hesitate to declare that he derived more stimulating ideas and satisfaction from contemplating masterpieces by true artists of the camera than from paintings. He noted with admiration the fresh and simple beauty of a theme, the disposition of masses, the direction of line and the technical means of expression. Yet he was quick to perceive any deviation from the doctrine of unity and simplicity in pictorial composition.



# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flerible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Marines

Closed October 31, 1916

*First Prize:* William S. Davis.

*Second Prize:* Franklin I. Jordan.

*Third Prize:* Christine B. Fletcher.

*Honorable Mention:* James Allan, Martha Curry, H. J. Durgin, Carl Hague, Carl Hermes, F. W. Hill, Taizo Kato, Warren P. Laity, W. H. McCrum, Alexander Murray, Anson M. Titus.

Special commendation is due the following workers for meritorious prints: O. C. Dean, Paul H. Means, Thomas E. Martin, Walter G. Willis.

## Subjects for Competition

1916

"Flashlights." Closes December 31.

1917

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.



## Miscellaneous — Advanced Competition

Closes February 28, 1917

MORE often, this year, will come these general topics for competition, in which the magazine leaves the contestant free to make his own selection of a suitable subject to enter for the prize. The last two contests of this nature proved so popular, and brought out so many good things, that they are to be made a quarterly feature in these competitions hereafter. There are always some pictures that never seem quite to fit any specific competition, yet have sufficient pictorial value to be worthy of entry when the opportunity offers. These general topics will give all such a chance to prove their value.

The entering of one's work in competition with that of other workers is an illuminating experience. One is not likely to be the best critic of one's own efforts. According to the temperament of the individual, his own output is either over- or under-valued. I fancy the winner of the first prize is often a more astonished person than his unsuccessful competitors; but on the other hand there are those who do find it "only what they expected!" The attitude of the producer toward the finished product is by no means necessarily a just criterion of its value, but is very probably influenced by the method of production. If a person of imagination and "temperament" goes about to produce a picture which shall represent some aspect of Nature, or some mood of his own mind, he is very likely to be disappointed with his results. He has in his mind's eye an ideal picture to which his best efforts fail to measure up, and therefore, to his mind, the picture he has made is a disappointment and a failure. But is it a failure for that reason? By no means. Although it fails to come up to the ideal of its maker, it may still bring a message to others; and just because the artist had an ideal toward which he was working, his picture will come nearer the goal of true art, and be more likely to impress the judges, who have not the author's standard of comparison, as having that illusive pictorial quality which indicates a prize-winner.

Another person, having produced a picture by similar methods, may be unable to separate the mental picture from the actual one, and induces the latter with many qualities of the former invisible to any eyes but his. He is the one who thinks the judges most unfair and that the pictures are not judged on their merits. In this category may also be included the snapshot-worker who finds among the mediocre products of a day's trip one negative that astonishes him by its superior technical quality. If, perchance, some admiring friend is lavish in its praise, then is he sure he has produced a masterpiece, and is aggrieved that the judges do not agree with him on the subject. For these, and many other reasons, it is apparent that in regard to one's pictures, as well as in other respects, "self-judgment is not righteous judgment."

Not infrequently it is some interested and art-wise friend who first opens our eyes to the fallacy of our own valuations. With delight he pounces upon some disreputable print we are striving to keep concealed, and when we try to apologize for it with the suggestion that it must have gotten fogged, he replies, "So? Well! You had better fog some more!" And when we bring forward our pet successes, he, if he be frank, will be apt to remark, "Harsh! False values! No composition! Rubbish!" A good way to determine which, in the eyes of the judges, is the better judge of your work, you or your friend, would be to submit some prints of his choosing and some of your own; or send your choice in one competition, and when the next general topic

comes around submit those of your friend's selection, and see what happens. Perhaps it would be illuminating to look over the prize-winners in similar contests. The results of the last contest of this nature were published in PHOTO-ERA for August, 1916. The winner of the first prize is a genre of great merit. Do we require natural simplicity? This has it. Naturalness? Also here. Subordination of detail? Remarkably well done. The pyramidal composition is present, but not too obvious, and the whole thing is pleasing and pictorial, though the incident is only the homely and every-day one of drawing water from the old well. The second prize was also given to a clever genre composition, "The Idler." This, too, is exceedingly simple, and free of obtrusive detail. The strong diagonal line of the composition is abruptly stopped by the upright corner support of the building, which is excellently placed about one third of the way in from the margin. The third print to win honors is a still-life study. Here we look for more detail, and we find it, but not too prominently featured. The bloom on the grapes, and the little catchy lights, are all there, but the leaves are not wire-sharp and obtrusive. They keep their place as accessory to the main interest.

In the previous contest of like nature, the results of which were published in May, 1915, the winning print is perhaps less obviously superior. Possibly the obstacles overcome in making the picture were taken into account by the judges, for they must have been great. The second award was for a splendid sea-view. The wave has been caught just at the strategic moment, as it tosses the spray from its crest on the point of breaking. The unity of the print would be improved, to my thinking, had one inch of the foreground been sacrificed. The print winning third place is a soft-focus portrait, in an unconventional pose, and the page of honorable mention prints is most profitable for study. Six of the ten were taken against the light, and three of these six are admirable sunset-effects. The one in the lower left-hand corner is a genre, the woman and child splendidly posed and well placed in the picture-space. The sheep in the right-hand print stand out with cameo-like relief, and in both the last-named prints the backgrounds commend themselves for simplicity and soft detail.

A glance at some other prize-winners shows the prize-winning print in the Home-Portrait competition, published in June, 1916, to be a well-spaced three-quarters portrait of a man, absolutely lacking in detail, so far as coat and background go, but with hands well posed and spaced. Second in merit is the print of the unposed little fellow sitting on the floor, with one toy and no other accessory. The winning prints among Vacation-Pictures, published in February of last year, are a single dark figure in natural pose, shown against the sand and surf of the seashore, and a very soft-focus picture in which "Three Men in a Boat" furnish the only accent against the dark water and shore.

From this brief survey of past prize-winners, it would appear that it is not the brilliant, detailful print, technically perfect though it may be, that carries off the cup, but the picture that subordinates detail to unity, and concentrates interest on its main feature by all means at the artist's command. In fleeing from the "sharp as nails," Scylla, do not fall into the Charybdis of over-softness. A leading Boston photographer was recently heard to say that what most persons meant when they spoke of soft focus was in reality no focus at all, or out of focus. While hard lines may be objectionable, form and texture are requisites of good work, and though detail may be distracting in the unessentials, in the main object of interest it is valuable.





WARRING ELEMENTS

FIRST PRIZE — MARINES

WILLIAM S. DAVIS

There are many methods of obtaining diffusion in the print, such as printing from the back of the plate, interposing one or more thicknesses of transparent celluloid between negative and paper, etc. The difficulty in these procedures is that diffusion is uniform throughout the print. They offer no power of selection. There is on the market a printing-frame that gives slight control. There are at the side little levers by which paper and plate may be separated. Part of the exposure may be made in contact, and then one end only or the entire paper may be slightly lifted. Some very good effects may be gotten by this means. Many are the means by which an artistically satisfying print may be obtained from a very crude and matter-of-fact negative. One really good print is worth all the time and effort one can expend upon it, and one such will be more likely to bring you the prize than a half dozen ordinary ones.

KATHERINE BINGHAM.

### Drying Negatives

DRYING is greatly facilitated by wiping the surface-water from both glass and film side. A quick and clean way with the film side is to put down on it a piece of clean, fine muslin, placing on this two or three thicknesses of blotting-paper and then gently rolling with a roller-squeegee.—*Photography*.

### Photographic Negatives on Paper

PHOTOGRAPHIC negatives on paper have obvious advantages over those on glass, viz., cheapness, lightness and lack of danger from breaking. They also permit considerable liberty in retouching and, if the right paper is chosen for the purpose, modifying-work may be done with considerable ease with pencil and brush. Bromide paper is usually employed, and exposed and developed the same as glass plates or cut films; but one should be careful to use a non-staining developer such as a combination of Metol and Hydroquinone. Such paper negatives are usually employed for enlarged positives, which possess a quality of breadth and a marked artistic effect all their own.

At first, a contact positive is made on a slow dryplate, which positive should be full of detail and contain all the gradations of the original negative. The quality of the resultant enlarged paper negative depends upon the character of the original glass positive, and is produced in the same manner as an ordinary enlarged bromide print. If thin, smooth, bromide paper is used, the enlarged paper positive may contain more grain than the negative itself, which may be an advantage in some cases, as it breaks up large and heavy masses and produces a suggestion of that much-sought-after atmospheric effect. Full exposure and the utmost de-



HAZY-BRIGHT

FRANKLIN I. JORDAN

SECOND PRIZE — MARINES

velopment are necessary in a successful paper negative, the density of which, judged by an abundance of orange light, is easily ascertained — of course, by looking *through* the negative picture.

Trial-exposures may be made with strips of bromide paper, so as not to waste large sheets in ascertaining the amount of correct exposure. A clean and non-staining developer for these paper negatives is prepared as follows: Metol, 48 grains; Hydroquinone, 80 grains; sulphite of soda, 2 ounces; carbonate of potash, 60 drams; water, 20 ounces. From this stock-solution take one ounce, and add three ounces of water and 10 drops of a 10 percent solution of bromide of potassium. After rinsing, the paper negative is placed in the fixing-bath for fifteen minutes, which latter should be composed of: hypo, 4 ounces; metabisulphite of potassium, 1 ounce, and water, 20 ounces. The print should be washed in running water for about an hour, or in a dozen changes of clean water. This moist print must be handled very carefully, as it is liable to injury.

If, in consequent printing, the grain of the paper negatives should be objectionable, greater translucency can be imparted by rubbing into the back a solution of Canada balsam (one part in 5 parts of turpentine) with the aid of a wad of cotton. Or, paraffin or bees-wax may be used. One of the most successful American pictorialists was George C. Elmberger, whose favorite method of printing was from enlarged paper negatives. PHOTO-ERA for July, 1908, contains a very practical and valuable article by Mr. Elmberger on this important subject.

### Avoiding Condensation on the Lens While Enlarging

I do not know how prevalent troubles from condensation are in other climates when using an enlarging-camera with artificial illumination, but in this damp climate I have experienced untold trouble from condensation on the lens to such an extent that frequently it was impossible in the time at my disposal to get the lens in such condition that it could be used.

After trying various remedies more or less injurious to the lens, the following proved successful in overcoming the trouble. My enlarging-camera is in my darkroom, and the 300-watt nitrogen light and Parallax reflector are in an adjoining room, the camera fitting into an opening in the six-inch partition. In order to accomplish the desired result, I removed the ground-glass from the camera and put it on the opposite side of the partition three-quarters of an inch away from it. Three-quarters of an inch distant from the ground-glass I placed a plain glass covered on one side with white waxed paper. My reflector, with the lamp, is nine inches back of the last-mentioned glass. The result is a ground-glass diffuser, separated from the camera by the thickness of the partition and an air-space of three-quarters of an inch, an opaque diffuser three-quarters of an inch from the ground-glass. The air-spaces act as non-conductors, and prevent excessive heating of the lens, so that condensation does not take place. This does not cut down the light appreciably over the usual arrangement. — *A. Livingston Mason.*

## Retouching Prints

ALTHOUGH it is quite customary to speak of retouching negatives, we seldom hear the term applied to prints. Any work done on the print is usually termed "finishing." Work on a bromide or gaslight black and white print may be done either with pencil or brush. Either of these does not precisely replace the other. Sometimes one, sometimes the other, is better. In general, brush-work is preferable; because, if even only fairly well done, it blends better with adjacent photographic result than does ordinary pencil-work. As a rule, the brush-work should come first. This helps to reduce pencil-work to a minimum. Brush-work would seem to be done with better blending effect when the print is neither quite wet nor quite dry; i. e., that state

## Long-Focus Lenses

It is often said that photography dwarfs the distance. This is remedied, says a writer in *Photography and Focus*, to a great extent by the use of a lens of longer focus. The size of the image of an object on the focusing-screen or plate varies according to the focus of the lens that is used. If, then, we use a five-inch lens from such a standpoint that some near object — say, a figure — is an inch high, we can get that figure still an inch high by going twice as far from it and using a ten-inch lens. But this difference of standpoint — although it has had so much effect on the near object that by using a lens of twice the focus we still only get the figure the same size as before — will be too trifling compared with the distance of a really distant object to make an



IN SAN FRANCISCO BAY

CHRISTINE B. FLETCHER

THIRD PRIZE — MARINES

it is in when it is taken from the wash-water and pressed between clean, dry blotting-paper for two or three minutes, and then exposed to the air for a few minutes. It is now limp and damp, but not wet. At first, practice should be with fairly but not very small brushes, one to lay on the color; the other, damp (but not wet) with water only to soften off the edges, if needed. If the color-brush is too wet, it will leave a wet blob on the print, which may easily give a dark edge or outline; if too dry, the color sinks in too rapidly, and is likely to look streaky or "edgy" in the result. Two broad sweeping touches of light color are better than one touch of darker color. Always begin with the lightest color, and work down to the lower tones. The touches and print will dry down a shade. Pencil-work must be done only when the print (paper) is quite dry. Ordinary lead-pencil is anathema; it leaves a shiny surface. Special "Negro" and other non-shiny pencils are obtainable from up-to-date dealers.

QUEX, in *Amateur Photographer*.

appreciable difference, so that, as far as the distant object is concerned, the use of the ten-inch in place of the five-inch lens has doubled its size. The effect of moving farther off and using a long-focus lens, therefore, has been to double the size of the distant objects while rendering near objects no longer than before. For pictorial work, a long-focus lens is nearly always of very great advantage.

## Cleaning Bottles

I HAVE a method of cleaning bottles which I picked up from a cottager in this country, and which I have never seen mentioned in any paper. It simply consists of placing in the bottle to be cleaned a small quantity of vinegar, and adding from the coal-heap a liberal amount of gritty coal and vigorously shaking. Thus treated, and rinsed out with cold water, bottles sparkle like crystal, and have no injurious properties left. It is a stubborn case that will not yield to this treatment.

H. E. TILL, in *The British Journal*.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
*With Reviews of Foreign Magazines, Progress and Investigation*  
Edited by A. H. BEARDSLEY



## An Automatic View-Finder Mask

To overcome the difficulty caused by seeing more in the reversible view-finder than is later seen in the negative, a masking-arrangement has been devised by the use of which this trouble is entirely obviated. The masking-device is suitably attached to the finder of the camera, and is composed of two thin leaves of metal hinged together. Each of these leaves is provided with an aperture to correspond with the size and proportions of the plate or film. These apertures are arranged relatively at right angles to each other. The leaves of the masking-device are held against the sides of the view-finder by the tension of a small coil-spring.

In use, should the photographer desire to take a vertical picture, the finder is rotated so as to dispose the viewing-screen beneath that opening in the mask that disposes the longitudinal dimension of the image vertically, and the view then shown upon the screen will be exactly like that of the finished picture. For the horizontal picture, the finder is rotated to that leaf of the masking-device, whereupon the viewing-screen will be brought beneath that aperture that disposes the longitudinal dimension of the film horizontally, and the view thus given will be the same as that which will be seen in the picture. The rotation of the finder from one position to another will cause the leaves to separate and become obliquely disposed against the tension of the coil-spring; but they adjust themselves correctly against the sides of the finder as soon as it is moved to its adjusted position.

## The Lens and Perspective

RECENT photographic exhibitions and salons show that there is a decided tendency on the part of photographers to employ lenses of too short a focus to produce pictures of satisfactory perspective. There seems to be an effort made to crowd into each picture as much as possible of the landscape whether or not it

is essential to the pictorial success of the composition. A six-inch lens on a 5 x 7 plate will include too much for the eye to grasp easily at the ordinary reading-distance. True, we obtain a wide-angle view which, commercially, may be desirable, but which, pictorially, is quite superfluous. If we could study the 5 x 7 picture six inches from our eyes, we would be able to see the landscape in pleasing perspective, and it would be satisfactory to us. However, most observers are obliged to view a picture not less than ten or twelve inches from the eye, and, in consequence, the use of a ten- or twelve-inch lens on a 5 x 7 plate is more apt to produce a picture in which the main subject is clearly predominant and the perspective pleasing.

It is often believed that one lens gives better perspective than another. Let it be clearly understood that all lenses which are free of distortion and placed correctly in front of a plate vertical to the lens-axis, give the same drawing or perspective from the same point of view. The difference between a six- and ten-inch lens is that the former includes more of the view than the latter—such objects as are rendered by both lenses being identical as far as perspective is concerned.

A picture is "unnatural," not because the lens made it so, but for the reason that the human eye is unable to include as much of the view as the lens. Unfortunately, ignorance of this fact has caused many a good lens to be summarily condemned by well-intentioned purchasers. A short-focus lens used on a large-size plate appears to produce incorrect perspective. It is incorrect only because the eye, placed in the same position as the lens, cannot see the same amount of subject. This statement is emphasized purposely because of its great importance to photographers.

The use of the swing-back is quite often responsible for a picture which is actually false in perspective. However, remember that this defect should not be traced to the lens, but rather to the swing-back, which alone causes the distortion.

The solution of the problem of correct perspective or drawing lies mainly in the selection of a lens whose focal length approximates the distance between the eye and the print to be viewed. In addition, a careful study of the best point of view from which to take the picture is essential to the production of pleasing and harmonious drawing.

The subject of control over perspective is one well worth the strict attention of photographers who wish to display pictures of true merit. It is a matter of understanding one's tools and putting each one to practical use. The modern lens is a marvelous product of knowledge and skill. To use it to advantage, requires thought, attention and true technical ability. However, its mastery is not beyond any photographer who will read and apply the knowledge he obtains from reliable sources ever at his command.

A. H. B.

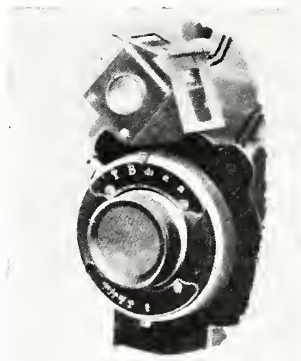


FIG. 2

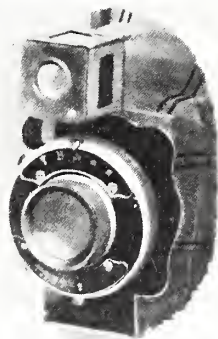


FIG. 1



# BEGINNERS' COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
333 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before PHOTO-ERA awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what contest it is intended.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

**Closed October 31, 1916**

*First Prize:* Louis R. Murray.

*Second Prize:* Robert P. Nute.

*Third Prize:* Halvor A. Caum.

*Honorable Mention:* James Allan, C. M. Campbell, Irving S. Lovegrove, R. B. Manck, Felix J. F. Marty, Mrs. Wilma B. McDevitt, J. O. Mesa, Charles D. Meservey, Dr. D. H. Pieter, Wm. A. Roy, Kenneth D. Smith, M. C. Still.

Special commendation is due the following workers for meritorious prints: Louis Fortriede, Jr., Charles P. Logan, Henry L. Osborn, C. A. Pierce, Mrs. H. G. Reed, Alvin Stallman, Rev. Paulus W. Weber, Elizabeth B. Wotkyns.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## A New Use for the Bulb

WHEN out on a hike or a long trip with the camera, it is often necessary to remove the accumulation of lint and dust which collects inside the shutter and also in the bellows. Users of cameras having a bulb will find the bulb useful in this connection. It is not desirable to blow out the shutter with the breath, on account of the moisture present.—W. A. PARKS.



## Preserving Negatives and Prints

THE winter-months, with less incentive to wander afield with one's camera, offer an ideal time to set one's photographic home in order. In photography — more than in most other pursuits — the importance of a "place for everything, and everything in its place" can hardly be overestimated. Especially in the dark-room is this true — where one is apt to want something quickly and there is not sufficient light to enable the eyes to do their part in locating it. It is with the preservation of negatives and prints, however, that we are chiefly concerned in this article.

How seldom does one find an amateur photographer who keeps any sort of adequate order among his negatives! If a certain film is wanted, the necessary search to unearth it is amazing. A loose lot of films in boxes and envelopes, or thrown promiscuously into a drawer, must be looked through, one by one. The film wanted is invariably at the bottom of the last package of negatives. One's prints are more apt to be kept in some semblance of order, because they are the ultimate result of our efforts, and, when shown to friends, must present a good appearance. The classifying of one's negatives is the backbone of any method of filing. Each individual will probably devise a method to suit his own convenience. They may be filed chronologically, if desired, or they may be classified by the names of the places where they were taken, and then arranged alphabetically. When many are taken in one locality, they may be divided into Street-Scenes, Buildings, Roads, Streams, Snow-Scenes, Portraits, etc., according to the individual requirements.

In looking over an accumulation of old films, to make such a classification, one will, doubtless, find many second-rate or worthless negatives. Room in the file will be economized if such are kept separate. There will be some that might just as well be destroyed; but there are others, perhaps, that represent things we can never secure again, and, although we are not likely ever to want prints of them, still we do not quite like to destroy them. Such, should be kept in a separate place, where it will not be necessary to handle them in consulting the file.

There are many patented negative-albums and filing-devices on the market. If any number of negatives are to be filed, and expense is a consideration, a home-made file answers every requirement. It should be arranged after the fashion of a card-index; but instead of cards, envelopes may be used to hold the films. Choose a box, or several boxes, a trifle wider than the length of the film, and, if they can be had with a deep cover, so that the box may be a little lower than the width of the films, they can be more readily consulted. Strong manila envelopes should be chosen, large enough to take the films easily and fit the box comfortably.

Having classified the films, one should make guides to stand a trifle above the envelopes and mark plainly the headings for each class. If there are many films taken in one place, they should also have sub-headings, with guides of a different color from the ones used for the main divisions. For instance, if many pictures have been taken about Boston, a card should be so headed, possibly in red ink; or the card could be of a distinctive color, then other white cards, or ones of the same shade headed in black, should be made out for such sub-topics as Public Buildings, Street-Scenes, The Common, Public Gardens, Fenway, Monuments, etc. This done, the negatives designated by each card should be placed behind it, each one in its envelope, plainly marked in the upper left-hand corner with the name of the building or subject represented. Any data that one wishes to preserve may be entered lower down on the

envelope. If there are several views of the same thing they may be enclosed in the same envelope, unless one has plenty of room and prefers a separate envelope for each. In making out the cards, each heading should begin a trifle to the right of the heading just in front until the right-hand edge of the box is reached, then the next should begin again at the left-hand margin. If the tops of the cards are cut away, leaving only the written part to project above the envelopes, the index will be more easily read and consulted. When there is a large number of negatives, it is easier to handle them if they are kept in rather small boxes instead of in large ones. If such a file is made, and kept up-to-date, it will be the easiest thing in the world to find at once any film that is desired. However, one must keep close watch of oneself, and see that all negatives are properly filed again after use.

Prints kept simply for reference or one's own convenience, might be kept in a similar manner, but those we wish to show to friends are better arranged in portfolios or albums. This is the easiest and least satisfactory way to mount prints for exhibition. Prints are seldom all of the same color, and the mount that sets off one to advantage kills another absolutely. An album is awkward for more than one to look at at a time, and if it is desirable to look at a print from a little distance the book is hard to prop up and keep open. A better way to display prints of any pictorial value is to mount each one separately on paper of a size and color suited to the individual attractiveness of each, and then enclose them in a suitable portfolio. The making of this portfolio will give full expression to one's artistic instincts, as it may be made of almost any material, adorned with one's initials or made as ornamental as one wishes. Pictures kept in this fashion permit a dozen persons to be entertained by looking them over. Moreover, they may be stood up across the room for inspection, and in various ways are more attractive.

KATHERINE BINGHAM.

## Interiors With a Hand-Camera

Too many owners of hand-cameras confine their use to snapshots only, having never taken time to investigate and experiment with the mysteries of the time-exposure. Through the colder months, when one is less active in snapshot-fields, there is good opportunity to solve the mystery and get better acquainted with one's apparatus.

It is often desired to make up a sort of souvenir of one's home, and the interiors seem, perhaps, to be beyond the powers of the small camera. It is quite possible, however, to get very satisfactory interiors with the kodak-type of instrument.

The first requisite is a firm support of some kind for the camera, either a tripod (and this is, of course, best if one intends to do much work of the kind) or a steady table, or perhaps a stepladder, as has before been suggested. The good point of the stepladder is, that it allows of so much variation in height. If the viewfinder shows too much floor and not enough ceiling, a higher viewpoint is indicated; whereas if too much ceiling is visible and not enough floor, the camera should be placed lower down. Look very carefully at the image in the viewfinder, and see exactly what it includes. If a part only of a chair or table is visible, move it either in or out, probably better out, for one trouble with most amateur pictures of house-interiors is that they include too much. Having located the height satisfactorily, and seen that the furniture is as well arranged as possible, the adjustment of the camera itself is the next thing to be seen to.

To increase the depth of focus so that any nearby





NATURE'S GIFT

LOUIS R. MURRAY

piece of furniture will be sharp as well as the far side of the room, set the distance on the focusing-scale at about half the distance from the nearest object included to the farther wall and then stop down the lens. If stop-numbers are on the shutter, use either 16 or 22. The latter, if the room is large, and the variation in distance, therefore, great. If the camera has simply a slide with three different sized openings, use the smallest of the three.

The question of exposure is really the hardest part of the problem, and is one on which very little help can be given, as so many things affect it. The color of the walls, the size and number of the windows, the quality of the light outside, etc., etc. One thing is apt to deceive the novice, and that is that the exposure is not shortened, but rather lengthened, by sunlight in the room. The stronger the light, the heavier the shadows, and it is for the shadows that we must expose. If the room has dark walls and only one window, the exposure, at 32, may be from four to five minutes, and a light wall with several windows may require, perhaps, thirty seconds. If one is to do much of the work, it would be a saving in the end to make several exposures of the same subjects, giving widely varying time, and make a careful record of all exposures. There are many exposure meters on the market, and any one of these will give an approximate time, which one can verify by experiment.

Having determined what time to give, set the shutter on "time" and carefully press the release so that the camera be not jarred in opening the shutter. See that no doors are slammed, or other jars met with during exposure, and when the time is up, another firm pressure closes the shutter, and the development will show how great a measure of success has been yours. Careful attention to these details is the prime requisite of the amateur-photographer who would attempt to make interiors with a hand-camera. Success in photographing interiors will enable the worker to record similar subjects associated with celebrities.

KATHERINE BINGHAM.

### Handling Amateur Films

SOME one asked for a plan to finish amateur films and not get mixed up on the orders. I have used several plans, but the one I have used for the past three years is the best. When I develop films, I number them all with a lead-pencil on the end of film as I unroll it. One should be sure to write on the film-side and not on the strip of paper across the end, as the paper washes off. All envelopes are also numbered as I take the films out of them. I put all film-orders in envelopes at the time the customers bring them in. When the films are dried after the developing and washing, it is easy to find the numbers on the films and on the back of each envelope. All film-numbers I put on back of envelope. Now, in order to get all prints straight, I put the number on front of envelope for prints, and number all prints that are from films in this envelope — the first envelope No. 1, and all prints No. 1; second envelope, No. 2, and all prints No. 2, and so on, after all prints are finished and dried. Sort back-side up, and sort in piles as to numbers. The rest is easy, to place in envelope with corresponding numbers. I hope that this will be useful to some one.

F. P. R., in *Association-News*.

### Expeditious Service

THE following amusing incident occurred in a well-known photo-supply store, in Boston, recently. A lady, accompanied by her very little daughter, was having her camera reloaded. At the same time, she asked for a No. 1 Brownie film. The salesman turned around and ordered it to be sent up from the floor below. After waiting for considerable time, the customer became impatient and asked the salesman, busy with another customer, what had become of her Brownie film. Suddenly remembering the order, and extremely embarrassed, the salesman replied, while hemming and hawing vigorously: "Why a — yes, ah — it's coming right up!" Greatly alarmed, the little girl exclaimed: "Oh, mamma! Did the man thwallow the film?"



## ANSWERS TO QUERIES



**M. G. S.**—A **convertible lens** is one of the type of the Bausch & Lomb Plastigmat, that can be used either as a doublet or each part can be used separately. The advantage of such use is that, in this way, lenses of three different focal lengths are available. The two parts give a rather short focal length, which means a fairly wide angle of view. The front-lens alone gives a narrower angle, and the rear-lens a still narrower. So that from the same spot one may obtain three different-sized images.

**G. E. K.**—The question of **when to stop development** is not so easily answered as it may seem, as different brands of plates and developers act differently, and the negative desired is as various as the taste of the workers. The inclination of the beginner is to take the plate out too soon. It loses a varying amount in the fixing-bath, but the loss is always considerable. As one examines the plate in development, it seems to gain in clearness up to a certain point, and then to lose detail in the lights, and many make the mistake to take it out at this point. It should be carried further, because of loss of density in fixing. When a plate is well timed, it will usually show a faint image on the glass side when it is fully developed. A little careful observation of how much is lost in fixing will soon teach the proper point to which the particular brand of plate you use should be carried.

**E. L. W.**—The **uneven density** of which you complain may have been caused by the developer not being evenly applied when the plate was first immersed. Or, it might be caused by uneven drying. If plates are left to dry over night, for instance, and, not being entirely dry in the morning, are brought into a warmer atmosphere to complete the process, a difference in density between the parts that have dried slowly and those that have been hastened is almost bound to appear. If the trouble is due to the latter cause, it can usually be removed by soaking the plate well and re-drying.

**H. H.**—Of course, **autochromes** are **photographs**, because they are made through a regular photographic lens directly upon photographic sensitized plates, which latter are then developed, fixed and dried. The only difference is that an autochrome is a photograph on glass instead of on paper. To be sure, in the process of preparation, the autochrome was a negative for a brief period of time, but was then changed into a positive.

**C. P. K.**—A **double image on a negative** is generally the result of one of two causes. Either the camera or the sitter has moved during the exposure. A double image in a print, if the negative is sharp, indicates that the paper has moved during printing, due usually to carelessness in examining the print.

**S. H. C.**—To **prevent ink from spreading** on paper, put a small quantity of powdered gum arabic on the end of a knife-blade and let it dissolve thoroughly. If not enough, add a little more, until the ink acquires the proper consistency. Ink thus prepared will not blot even on coated paper.

**R. A.**—A **replica** is a duplicate work of art—painting or piece of statuary—by the artist *himself*, and regarded, equally with the first, as an original. A reproduction (or a copy), however well done, is not a replica. Many persons make this mistake in speaking and writing.

**A. C. H.**—**Whether to use dryplates, roll-films or film-packs** has always been a perplexing problem to the amateur. The only basis upon which a

satisfactory decision may be reached is the one of suitability to the work in hand. The average amateur will find roll-films and film-packs eminently suited to nearly every requirement of travel, home and snapshot-photography. The portability and daylight-loading feature of roll-films and film-packs is a great convenience. On the other hand, the amateur who enjoys taking pictures because of the artistic and technical knowledge he gains from his efforts, prefers to use dryplates. Used in connection with a high-grade anastigmat lens, a dryplate is to be preferred to the use of film whenever the best possible technical result is desired. Moreover, among dryplates, there is a wide selection of color-sensitive and speed emulsions.



"DANIE"

ROBERT P. NUTE

SECOND PRIZE — BEGINNERS' CONTEST





L. E. W.—A very difficult subject to manage. The strong contrast between the flecks of sun and the deep shade makes a spotty and disagreeable light. While very charming to observe, with the dancing lights through the leaves, it requires a very well-calculated exposure to put any of its charm on paper. The data say  $\frac{1}{25}$  second exposure. If  $\frac{1}{5}$  had been given, the result would have been more satisfactory.

E. T.—A well-lighted window-portrait nearly spoiled by the obtrusive background. The figure in the wall-paper, and the numerous small pictures, make a "busy" setting, that nearly puts out of notice the really attractive figure.

E. H. O.—A good pose and arrangement, but very poorly lighted. There are no shadows to give relief and roundness to the features. The light seems to come from directly behind the camera, which is about the worst quarter possible. Watch the shadow of the nose in arranging your lighting, and when it falls toward the corner of the mouth you have a "safe and sane" arrangement.

S. Y. A.—An excellent composition. The zig-zag line of the road leads the eye to the very delightful little vista in the distance, and the plane-values are excellently depicted. The dark tree on the left throws the distance back, and gives a fine balance to the whole.

B. J. S.—A very good vista effect marred by underexposure. As it is, the distance is rather faint, whereas the framing trees are very dark. A little more time would have enabled you to bring up the detail in the trees without clogging the lights, and given you a more even-printing negative.

J. M. F.—An admirable ploughing-scene, both technically and in composition; but alas for the interest in the camera. Had you asked the ploughman to start up his team, you could have caught them just straining into the collar, and the man's interest would

have been directed toward them instead of the picture-taker.

W. H. S.—"A Road Under the Trees" is better in one respect; namely, the grass and road are in shadow, consequently their character has been preserved. The distance beyond the trees, however, is again glaringly white and without any character. As in the case of the other print, the trouble lies with the exposure, which has not been well balanced. You have exposed merely for the trees, and left the sunlit portions of the picture to take care of themselves. An exposure in a different kind of light, or at a different time of day, and properly calculated, would have yielded a more harmonizing and pleasing result.

"A Home-Portrait" is doubtless an excellent likeness of the lady; but as she is arrayed in an apparently

black or, at any rate, an extremely dark garment, the lack of exposure you have given has imparted to the dress a totally black appearance—without any detail or character. The face also lacks modeling and gradation. It is clearly a case of underexposure, which can easily be corrected the next time you make a portrait of this model.

F. W. P.—Your portrait appears to be underdeveloped and slightly overprinted, but the flesh-tones are excellent. The direction of the eyes is faulty—much better had you looked into the camera rather than upward. Also, there should be more space directly behind you, in the picture-area. In other words, the matter of space should be re-



A COUNTRY-ROAD

HALVOR A. CAUM

THIRD PRIZE — BEGINNERS' CONTEST

versed—less back of you and more in front.

H. C. K.—Your road-view is very picturesque, well spaced and technically faultless. Unfortunately, the picture is marred by a tall, ugly telegraph-pole, which is the most conspicuous object in the picture. You show much promise, and for a reliable pictorial guide, such as you seem to need, we recommend heartily, "Pictorial Composition," by Henry R. Poore, \$2, sent postpaid; but combined with PHOTO-ERA for one year, the price for the two will be \$3.25 instead of \$3.50.

Another excellent book for your consideration is "Pictorial Landscape-Photography," by Paul Lewis Anderson, \$1.50; with PHOTO-ERA for one year, \$2.25.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

| MONTH AND WEATHER       |                |                |               |               |                 |                |                |               |               |                              |                |                |                |               |                      |                |                |                |               |                  |  |  |  |  |
|-------------------------|----------------|----------------|---------------|---------------|-----------------|----------------|----------------|---------------|---------------|------------------------------|----------------|----------------|----------------|---------------|----------------------|----------------|----------------|----------------|---------------|------------------|--|--|--|--|
| JAN.,<br>NOV., DEC. †   |                |                |               |               | FEB., OCT.<br>‡ |                |                |               |               | MAR., APR.,<br>AUG., SEPT. § |                |                |                |               | MAY, JUNE,<br>JULY ¶ |                |                |                |               |                  |  |  |  |  |
| Bright Sun              | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun      | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun                   | Hazy Sun       | Diffused Light | Dull           | Very Dull     | Bright Sun           | Hazy Sun       | Diffused Light | Dull           | Very Dull     |                  |  |  |  |  |
| HOUR                    |                |                |               |               |                 |                |                |               |               |                              |                |                |                |               |                      |                |                |                |               |                  |  |  |  |  |
| 11 A.M. to 1 P.M.       | $\frac{1}{32}$ | $\frac{1}{16}$ | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{1}{2}$   | $\frac{1}{32}$ | $\frac{1}{16}$ | $\frac{1}{8}$ | $\frac{1}{4}$ | $\frac{1}{2}$                | $\frac{1}{50}$ | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$        | $\frac{1}{60}$ | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$    |  |  |  |  |
| 10-11 A.M. and 1-2 P.M. | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{2}{3}$   | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{2}{3}$                | $\frac{1}{40}$ | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$        | $\frac{1}{60}$ | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$    |  |  |  |  |
| 9-10 A.M. and 2-3 P.M.  | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $1^*$           | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $1^*$                        | $\frac{1}{40}$ | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$        | $\frac{1}{50}$ | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$    |  |  |  |  |
| 8-9 A.M. and 3-4 P.M.   |                |                |               |               |                 | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $1^*$         | $1\frac{1}{2}$               | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{2}{3}$        | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$    |  |  |  |  |
| 7-8 A.M. and 4-5 P.M.   |                |                |               |               |                 |                |                |               |               |                              | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{2}$ | $\frac{3}{4}$        | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$ | $\frac{2}{3}$    |  |  |  |  |
| 6-7 A.M. and 5-6 P.M.   |                |                |               |               |                 |                |                |               |               |                              | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{3}{4}$ | $1^*$                | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{3}{4}$    |  |  |  |  |
| 5-6 A.M. and 6-7 P.M.   |                |                |               |               |                 |                |                |               |               |                              |                |                |                |               |                      | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1\frac{1}{2}^*$ |  |  |  |  |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.**

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

|           |       |       |
|-----------|-------|-------|
| U. S. 1   | F/4   | × 1/4 |
| U. S. 2   | F/5.6 | × 1/2 |
| U. S. 2.4 | F/6.3 | × 5/8 |
| U. S. 3   | F/7   | × 3/4 |
| U. S. 8   | F/11  | × 2   |
| U. S. 16  | F/16  | × 4   |
| U. S. 32  | F/22  | × 8   |
| U. S. 64  | F/32  | × 16  |

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16×4=1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16×1/2=1/32. Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
Anso Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Imperial Special Sensitive  
Seed Gilt Edge 30  
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
Barnet Red Seal  
Cramer Instantaneous Iso  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
American  
Anso Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film  
Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome



# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Constructive Criticism

"CRITICS, like doctors, differ. The amateur-photographer who desires the approbation of a number of critics, should proceed as follows: He should make a very large print with plenty of foreground and more sky, and a whole series of interesting objects from side to side, and place it behind a mount with a small cut-out opening. Critic number one will say the sky is fatal; no sky wanted; upsets the tones. Amateur pushes print up; sky disappears. Critic number two decides on too much foreground; loudly calls for sky — would give space and air. Print shoved down accordingly; highly commended. Critic number three thinks sky and foreground nicely balanced, but mill too central. Amateur slides print sideways; just right. Critic number four does not care for mill; out of harmony; a tall tree would have been more in keeping. Another side-slip; mill off, tree on; quite artistic."—"THE WALKER."

This reminds me of an incident in the history of the 1902 circulating album of the Postal Photographic Club. A new member contributed an unattractive print — a 7 x 9 landscape. Some of the members were unduly severe in their criticism of the newcomer's picture. Wrote one: "Too much sky. I suggest trimming an inch off the top." The next critic opined: "Too much space at right of tree. In addition, I recommend cutting one and one half inches off the right." His successor: "Picture now lacks distinction; cut off two inches from the left!" The next critic: "The tree at the right is black and ugly. An additional strip of two and one half inches off the right will remove it and yield a refined and panel-shaped composition." The next butcher: "An upright landscape is an abomination. I say, cut off two inches from the bottom, and you will do something!" The next in order: "Well done, brother! The proportions are now fine, 4 x 3. Begins to look promising. To help the cause along, I suggest that what remains of the baldheaded sky be eliminated. Take off two inches from the top!" The prince of executioners: "You're all wrong, boys! Let him now trim one and one half inches from the right and ditto from the left, and the result will make us all happy!" The rest then wrote in terms of approval, for the picture had been *entirely trimmed away*.

## The Result of an Obsession

APROPOS of diffused definition, which broke out in the form of an epidemic a number of years ago in the amateur's camp, I recall the story of a well-known worker — some regarded him as a leader — who looked with contempt upon any photograph that possessed well-defined detail. One of his critics described him as visiting the Dutch room in a certain European art-museum and examining the paintings of Dou, Mieris, Netscher and Hondcoeter with a hand-screen covered with cheese-cloth! Only in this way could he derive any satisfaction from viewing the carefully painted pictures by these masters of detail.

A similar case developed the other evening at an illustrated lecture given by an eminent naturalist. His lantern-slides depicted wild animals photographed by flashlight at close range, and although the definition of the subjects was extremely clear — owing to the lec-

turer-camerist's skilful use of his "high-speed" equipment — they appeared painfully out of focus on the screen, to the great annoyance of many persons in the audience. Indeed, so distressing was the result that several spectators shut their eyes, or left the hall before the conclusion of the entertainment.

The lecturer was so absorbed in his discourse that he appeared not to notice the trouble with his illustrations, but later was criticized by several of his friends. An investigation revealed the fact that the man substituting for the regular lanternist was an amateur photographer, and an extremist in the use of a soft-focus lens he had but recently acquired. Carried away by enthusiasm for his weakness, he had purposely and deliberately, but with no evil intent, applied the soft-focus effect to the lantern-slides he was projecting by simply putting them out of focus!

## Why Should Autochromes Fade?

THE occasional remark of inexperienced color-photographers that Autochromes have no latitude of exposure is on a par with the assertion, sometimes made, that Autochromes fade rapidly, whether exposed to the light or not. Although many Autochromists keep specially choice plates in display-boxes, which they unfold when wishing to examine or show them, there are others who use beautiful examples of this process of color-photography as window-transparencies, and find that the colors do not change. Of course, it is not advisable that Autochromes be exposed constantly in a south-window, to direct sunlight, where almost any dyed-stained material must in time give way.

Yet I still have — and I always show it with great satisfaction — the beautiful Autochrome portrait of Monsieur —, of Lyons, France, made in 1907 by the Lumières. It was presented to me by M. Antoine Lumière, as a souvenir of the dinner given in his honor, at the Hotel Brunswick, Boston, November 1, 1907 — the memorable year when the Lumières astounded the world with their invention, and its immediate and successful application, of the Autochrome process of color-photography. Naturally, I prize this Autochrome portrait very highly, and frequently look at it to admire the wondrously luminous and delicate coloring of the flesh-tints, the eyes and the head, and also the brilliant red-orange and yellow robe thrown over the shoulder and chest, as if to glorify the beauty of the achievement. In every detail and nuance, the colors are just as fresh and true as they were when the genial chevalier of the Legion of Honor placed the treasure into my welcoming hands.



## Practical Evidence

"I GAVE that youngster of mine a toy printing-press, a steam-engine, a camera, a box of dryplates and some other things to find out whether his tastes were artistic, mechanical, literary or what — but the test didn't work."

"Why, what did he do with them?"

"Smashed them all up."

"Why, man, it's as clear as day — he's going to be a furniture mover."—*Exchange*.





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



IN view of the increasing interest in our own native scenery, it is but natural that photographic publications give prominence to specially beautiful pictures of that character. The view of the Cascade Mountains, by the eminent photographer A. H. Barnes, which decorates our front-cover this month, and is repeated on page 4, reveals the physical aspect of that range—a continuation in Oregon of the Sierra Nevadas of California—in a singularly striking way, and better than would a view in summer. The name is derived from the cascades of the Columbia, which are formed where the river breaks through the Cascade Range. Mr. Barnes enjoys an enviable reputation as a skilled photographer of the mountain-ranges of the Pacific, and the present picture is one of typical excellence. Data: March 1, 1916, 8 A.M.; direct sunlight; 4 x 5 Poco; 6-inch Oynar, F/6; stop, F/16;  $\frac{1}{2}$  second; Cramer Inst. Iso. Double-Coated; ciko-hydro; enlarged on Eastman Bromide.

The portrait of John J. Enneking, the eminent Boston artist, recently deceased, occupies the place of honor in this issue. It is an exceedingly faithful though not altogether comprehensive likeness. Mr. Garo has interpreted the man rather than the artist, and his subject, while possessed of varied gifts, was scrupulously honest, yet wary and astute, as may be noted by the penetrating look in the eyes. Though an idealist in his art, Mr. Enneking had correct and well-defined business-instincts, and, had he chosen to forsake the brush, he would have been a successful merchant or financier. In fact, he united with his strong artistic temperament and creative power, a rare degree of business-sagacity, which enabled him to accumulate considerable wealth. Mr. Enneking, as an artist, and his appreciation of photography as an art, I have sketched in an editorial.

His interest in pictorial photography was very marked, and not longer ago than last summer he wished that he had the opportunity to talk to an aggregation of pictorial workers, stating his sympathy with their activities, and also to point out where they could improve the treatment of their themes by excluding all that tended to detract from the principal point of interest. In Enneking, pictorial photography has lost one of its staunchest friends, a true lover of the beautiful and noble creations made possible by means of the camera; and whenever an amateur gazes upon an Enneking canvas, he will find there the exemplification of the great artist's ideals, and what, in the form of helpful and friendly criticism, they meant to the appreciative student—painter or photographer. Data: July, 1916, 10 A.M.; in studio; 18-inch Verito, at full opening; 8 x 10 plate; pyro; 8 x 10 W. & C. Platinotype print.

The bleakness of an autumn-landscape is well expressed in "Windswept," page 5. Though the clouds, overhead, are a fitting and natural part of the scene, they are a bit too strong, and tend to make the picture appear top-heavy. No data are at hand, but it is safe to say that too deep a color-screen was used, which would tend toward over-correction. The lonely tree seems to say that the wind is blowing a bit strong.

Another forceful portrait by Mr. Garo, page 7! The subject is a man of many talents—artist, traveler, explorer, scientist, historian, lecturer, photographer,

athlete. As one of his friends said pointedly, "A man with such a wealth of talents needs to be an athlete to defend it!" And the truth is, Mr. Furlong excels in each of his accomplishments. He has recently concluded a successful lecture-tour, and is preparing to accompany an important scientific expedition, as ethnologist, in the interest of the Smithsonian Institution, to the French Congo, in the spring. Dressed in explorer's costume, Mr. Furlong presents a typical likeness of himself. He stands revealed as a man of intellect, vitality, courage and determination. No small degree of the success of this portrait is due to the artist, a prince of interpreters—John Garo. Data: 18-inch Voigtlander, at full opening; July, 10.30; bright studio-light; 2 sec.

The winter-vista, page 11, is from the well-filled cabinets of G. R. Ballance, and bears the impress of his familiar artistic skill. No data.

One of the most picturesque of small waterfalls is the dainty "Hanging-Rock Falls," page 13. As an accomplished camerist, Mr. DeBevoise is known to subscribers to PHOTO-ERA. The present picture is one of his best contributions to these pages. The point of view, the perspective and tone-values, are alike admirable. Data: August, 11 A.M.; brilliant sunlight; 5 x 7 Korona camera; R. R. lens; stop, U. S. 16; no color-screen;  $\frac{1}{50}$  second; Hammer Special; pyro in tank; direct print on Azo A Hard; hypo-alum toned.

The numerous views of the sea, whether at sunrise or sunset, made by Mr. Pertuch always suggest a calm and restful feeling, in contrast to the agitated waters depicted by other pictorialists. I find that the predilection in favor of either kind of presentation is largely a matter of temperament, of course assuming that I am not mistaken as to the personality of the camerist in each case. If this little digressing point is of interest to any one, let him investigate. Mr. Pertuch's present sunset-view, page 15, is most pleasing, and, as a composition, it excels in the harmonious balance of chiaroscuro. Data: July; 4 x 5 Premo; 6-inch Collinear, at F/8;  $\frac{1}{50}$  second; Cramer Iso; pyro.

That one need not always go far from home to set up his camera, is shown by Mr. Ludlum's exceedingly effective bit of winter, page 17. The line of snow beginning at the bottom-step and winding its way around the potted plant and along the top of the wall has been perceived by the observant eye of a true picture-maker. It is an admirable pictorial design. Data: December; bright and cloudy;  $\frac{1}{25}$  second; 5 x 7 Premo; 6 $\frac{3}{4}$ -inch Velostigmat, at F/6.3; Polychrome plate; pyro; glossy Cyko soft print; Duratol.

Rudolf Eickenmeyer's rural landscape, page 18, a group of sheep in an ideal landscape, is what one may expect from a pastmaster—not so long ago one of America's pictorialists, and then relegated to the rank of a professional portraitist. All play and little or no bread-and-butter work would not do for him, and hence the change. Nevertheless, he finds diversion in an occasional outing, and the result is a picture in his own artistic vein. Whether the present performance is above criticism, is something of a question. Personally, I feel that the sheep are too low in the picture-space. If this be true, the fault can be corrected easily by trimming about half an inch off the top. But I do

not object to the animals being exactly in the middle of the picture. Ordinarily, such a thing is to be avoided; but all depends on how the whole subject is managed — including the character of the general pictorial interest. No data.

Carl Hague contributes a superb and typical scene along the Pacific Coast — broad ripples softly advancing over the smooth sand along the shore, and, far off in the distance, ranges of low-lying hills topped by banks of clouds. Page 19. The whole pictorial design is one of extreme beauty. A notable point in this graceful composition is the portrayal of atmospheric perspective. Data: March, 12.30 p.m.; light, extremely brilliant; 4 x 5 Conley camera; 6-inch Zeiss-Kodak lens, at F/8; 3-time color-screen;  $\frac{1}{100}$  second; 4 x 5 Standard Orthonon; print on Enlarging Cyko.

One of the justly admired prints in a New York spring-exhibition, of last year, was "The Water-Nymph," by Miss Katharine Brucherseifer, reproduced on page 21. In my humble opinion, the figure, slowly advancing in the shallow waters along the shore, exemplifies the extreme in grace and beauty of movement. The illumination is delicate and consistent, and the setting eminently fitting and effective. The whole scene is imaginative, and is filled with refined, poetic beauty. The proportions are perfect, and the artistic treatment deserves the highest praise.

We welcome Dr. D. J. Ruzicka's return as a pictorial contributor with a feeling of intense satisfaction. His interpretation of a winter's day in the Bronx, page 23, at once wins our admiration for the beauty, power and fidelity of its performance. The sense of being alone in these still and snow-filled woods is akin to reality, and the eye delights to follow the play of sunlight everywhere. Guided by his unerring artistic instinct, Dr. Ruzicka gives his pictures perfect proportions, which mean so much in the pictorial design. Data: January, 3.30 p.m.; sunlight;  $\frac{1}{2}$  second; 5 x 7 Orthonon; Rytol; 5 x 7 Korona camera; 11-inch R. R. lens; stop, F/16; 3-time Ideal color-screen; 5 x 7 Platinum print.

In "Winter-Evening," page 25, Dr. F. F. Sornberger evinces his customary sympathetic touch in handling his subject. Indeed, he resembles Dr. Ruzicka in the approach and treatment of his theme. In the case of either worker, one is always sure of the free expression of the feelings of a nature-lover, who unconsciously reveals his inner self in his pictures, and for which we all love him. In the language of the immortal bard, "One touch of nature makes the whole world kin." Data: January, 3.30 p.m.; faint sunlight; snowing lightly;  $\frac{1}{25}$  second; Cramer Iso; Rodinal; 5 x 7 Century camera; Goerz Dagor (rear-combination); 16-inch focus; at F/16; Cyko print.

PHOTO-ERA readers know W. R. Bradford, the busy cartoonist of a big newspaper, as a master-photographer with a penchant for humorous portraits and peerless still-life subjects. One evening, as he emerged from the office of his daily grind, he was struck by the strange beauty of an illuminated street-scene. Quicker than thought he set up his "box" and "let her go" for 90 seconds. The uninitiated will shake their heads at the temerity of the man, while the expert will nod approvingly. No; it's not a view on the Grand Canal, but a rainy night in Quaker City, and mighty well done. The points are all good and very obvious. Yes; it's perfectly great and hard to beat! Data: 4 x 5 Cycle Graphie; Cooke lens, at F/11; Marion Record plate, unbacked; Zerbec's pyro-acetone for "knocking" halation, which Mr. Bradford jocosely describes as "some method;" 8 x 10 American Platinum print, warm black, from enlarged negative.

## Advanced Workers' Competition

FEW pictorialists have studied the subject of marine-photography, and have labored in that fascinating and prolific field with camera and pen, as has William S. Davis. Indeed, he has come to be regarded as an authority in this important branch. The pages of PHOTO-ERA, for a number of years past, bear testimony to his ability as author-photographer. In the present instance, his first-prize picture, page 33, is an artistic achievement, and worthy to take its place beside the work of a first-class marine-painter, monochrome though it be. Mr. Davis' aim is not to arrest motion — almost any one with a high-speed equipment can do that — but to convey a sense of motion without, however, sacrificing the outlines (drawing) of the moving body or object. Workers ambitious to excel in marine-work should read Mr. Davis' illustrated papers on this subject. They are listed in the PHOTO-ERA Reference Library, begun in the June, 1916, issue. Data: October, 3.10 p.m.; good sunshine;  $\frac{1}{25}$  second;  $2\frac{1}{4}$  x  $3\frac{1}{4}$  pocket-camera; R. R. lens, at F/8; Ingento A ray-filter; Vulcan film; print enlarged on Velours Black.

The majesty of a sailing yacht has been interpreted in a very felicitous manner by Franklin I. Jordan, page 34. The pictorial scheme shows admirable artistic judgment, as we note the placement of the principal object, the proportions and the vanishing atmospheric perspective. The tone in the original print is soft and pleasing. Data: August, 2 p.m.; hazy sunlight;  $3\frac{1}{4}$  x  $4\frac{1}{4}$  Sylvar camera; 5-inch anastigmat, at F/11;  $\frac{1}{100}$  second; Wellington Anti-Screen; pyro; Enlarging Cyko.

## The Beginners' Competition

THE making of an artistic and really consistent and harmonious still-life remains a problem to most workers, whether in painting or photography. This subject I have made virtually my own for some time past; but several extremely successful performances in this line stand to the credit of artist-photographers, viz., W. R. Bradford, W. S. Davis and H. R. Decker, and have appeared, periodically, in these pages. A creditable attempt in this direction is by Louis R. Murray, page 39. The theme and its arrangement are not new, it is true; but Mr. Murray has tried to get away from the extremely hackneyed style of arrangement. In the matter of lighting, too, he has made a gain. Now, if the several groups of the fruit were to be reduced to one, or even to two of unequal size, and placed and lighted properly, without changing the position of the loaded basket, the element of artistic simplicity would come into play, and with it a very promising result. Data: October 15, 1916, 2.30 p.m.; north window; dull day; 2 minutes;  $9\frac{1}{2}$ -inch B. & L. R. lens; stop, U. S. 8; Ingento C ray-filter; Standard Orthonon; E. K. pyrosoda in 20-minute tank; enlarged on P. M. C. Bromide.

Portraiture is usually, and, quite naturally, the hardest nut for the average amateur to crack; but occasionally one meets a very successful attempt, which, as in the case of Robert P. Nute, page 40, is no hazardous snapshot. Special credit is due to Mr. Nute for having made his portrait in the open and against the light. The light is well distributed, there is an absence of false and distressing shadows and no objectionable contrast. Data: "Danie," the Cumberland guide; at Cumberland Falls; about September 1, 1916; rainy, subject on porch; 5 x 7 Century view-camera; 14-inch element of an  $8\frac{1}{4}$ -inch Turner-Reich lens; no stop; 1 second; plate developed with pyro; print on Artura Iris.

(Continued on page 48)





## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### Photo-Era Increases Its Price

IN consequence of the extraordinary rise in the cost of coated paper, printing and halftones — due to the European war — the Publisher has been obliged to advance the subscription-price of PHOTO-ERA from \$1.50 to \$2.00; single copy, from 15 cents to 20 cents.

The slight increase in price will go into effect March 1, 1917, and subscriptions received before that date will be accorded the old rate, viz., \$1.50 a year; clubbing-price, \$1.25.

Whereas the slight increase of fifty cents may not mean much to the individual subscriber, in the aggregate it is vitally important to the Publisher, as it will enable him to help meet the greatly increased expenses of publishing PHOTO-ERA without diminishing its many excellences that have given it the high reputation it enjoys among photographic magazines.

### Annual Exhibition of the Union Camera Club

THE annual show restricted to the members of the B. Y. M. C. U. Camera Club, 48 Boylston Street, Boston, was held in the club's room, December 7 and 8, 1916. The judges, Frederick W. Horsman, Frederick W. Allen and Florence Maynard, made the following awards. Landscapes: first prize, Arthur Hammond; second, T. W. Gary. Portraits: first prize, Arthur Hammond; second, Louis Astrella. Marines: first prize, F. W. Hill; second, C. E. Dodge. Genres: first prize, Chester Grillo; second, Louis Astrella. General: first prize, G. H. Seelig; second, Charles G. Wells.

There was unmistakable evidence of serious and painstaking endeavor to produce pictures of a pleasing artistic character, but in most cases there seemed to be an inadequate comprehension of the principles of simplicity and unity in composition. The tendency seemed to be — notably in the genre-class — towards an excess of picture-material, when restraint in that direction is more conducive to good results. The principle of balance by light and shade is another study neglected by most of the exhibitors, two or more prominent and strongly lighted objects in one small picture-area being unable to express a coherent story.

What seems to be needed is a series of heart-to-heart talks by a capable and sympathetic instructor on pictorial photography. It is not enough to have as a fellow-exhibitor an artistic worker like Arthur Hammond, who naturally captures the leading prizes, year after year. To exert a really beneficial influence, Mr. Hammond must not only be constantly at his best — which he is not — but he must, himself, show evidences of marked and steady advance in his art. Rather should the members of this club strike out independently, each for himself, with his mind and heart set on a high standard, and guided by sound and earnest study of the best in pictorial art. Notable artistic excellence in motive and technique distinguished the following prints: "Scarborough Bridge," C. E. Dodge; "Peaks and Pines," Edwin C. Howard, and "Florida Sunset," F. W. Hill — among the landscapes; "The First-Born," Louis Astrella, and "Getting Ready for Business," Chester Grillo — in the genre-class; portrait of an artist in his studio, Arthur Hammond; view of a big steamer at her dock and Custom-House tower in the

distance, C. E. Hill, and "Sunday Afternoon," by Akasu — among the Marines; "A Morning Gallop," G. H. Seelig; "Harvard Bridge at Early Evening" (by moonlight), Charles G. Wells; "The Woolworth Building," Ernest H. Washburn, and "Waiting for the Last Boat," Chas. G. Wells. The exhibit comprised about one hundred pictures.

### The New Technicolor Process

THE new color-process developed for the Technicolor Motion-Picture Corporation by a firm of research-engineers, Kalmus, Comstock & Wescott, Inc., bids fair to become an important commercial development. The pictures are capable of showing rapid motion without the well-known color-fringe phenomenon; and since they do not depend on physiological synthesis for their color-effects, there is no unnatural eye-fatigue.

Several thousand feet of film have been privately exhibited in Boston, and have met unqualified approval from a large number of critical observers. The company is now taking pictures in the vicinity of Jacksonville, Fla., to be used in the production of a five-reel feature which will be ready for the public before many weeks.

A particularly important innovation which these engineers have instituted is a portable film-laboratory and development-plant built into a Pullman car. This results in a material advantage through the fact that hitherto a great deal of inconvenience has been suffered on account of the necessity to send the films for development to a distance from the place at which they are taken. Faults in the film have therefore been discovered too late for easy correction. With the new portable plant on the scene of production, the final film can be examined on the screen almost immediately after it is taken, so that it is quite convenient to retake any portions that may require it.

The plant is also particularly impressive on account of the completeness of its automatic control. Practically nothing, from start to finish, is left to the guesswork of the operators. Machines invented for the purpose apply all wet treatment to the film; the camera is motor-operated at exactly the desired speed; and the exposure allowed the negative is determined by a scientific light-measuring instrument of new design.

As regards personnel, C. A. Willatt, well known as "Doc" Willatt in the motion-picture world, of which he is one of the leading experts, is director of the department of production. The technical staff includes Dr. Herbert T. Kalmus, former director of one of the Canadian government research-laboratories, Dr. Daniel F. Comstock, of the Massachusetts Institute of Technology, and Prof. E. J. Wall, the well-known photographic expert. The equipment is in charge of W. B. Wescott.

We understand that the Technicolor Company is amply financed, and that rapid commercial development may be expected.

### An Old Master

*Miss Manyars* — "Yes, that was painted of me when I was a little girl."

*Colonel Blunt* — "Is it a Rubens or a Rembrandt?"

*London Opinion.*



## Charles Wesley Hearn's New Studio

CHARLES WESLEY HEARN, the veteran photographer, and author of one of the early standard works on photographic printing (still unequaled for its practical value), former president of the P. A. of A. and the P. A. of N. E., an artist-photographer of exceptional ability, has removed from his restricted quarters at 729 Boylston Street, known as the Lenox Studio, Boston, Mass., to 2832 Washington Street, between Dudley Street and Egleston Square, Boston, Mass. Mr. Hearn's new studio is an exceedingly artistic-looking two-story building, very eminently adapted to an artist's needs, also located very conveniently near electric and elevated car-lines, where Mr. Hearn is prepared to give unusually prompt service, and to maintain his well-known high standard of artistic and technical excellence.

## The Fifth International Photographic Salon

THE catalog of the Fifth International Photographic Salon, held at the Palace Hotel, San Francisco, under the auspices of the California Camera Club, November 25 to December 2, 1916, has been received. It is a quarto size brochure, deep-orange cover, and contains a list of officers of the club, a list of exhibitors, and halftone reproductions of sixteen selected prints in the exhibition by Hilda Altschul, A. D. Chaffee, T. J. Chorley, E. L. Crandall, John Paul Edwards, W. G. Fitz, Forman Hanna, Harold L. Harvey, Frances MacCulloch, Hirvey W. Minns, W. H. Rabe, H. W. Schonewolf, Edward D. Taylor and Ernest Williams. The catalog shows enterprise and taste in its preparation, and is a credit to the committee in charge.

## Garo's Multiple Gum-Print of John J. Enneking }

AMONG the remarkable multiple bi-gum portraits of eminent Bostonians shown by John H. Garo, in the Boston Art Club art-gallery last fall, was one of the late John J. Enneking. In addition to its conspicuously artistic value, the picture was recognized by relatives and friends as the best likeness of the artist in existence.

In view of Mr. Enneking's zealous devotion to the best interest of the Boston Art Club, a number of the great artist's admirers, and members of the club, purchased the portrait of Mr. Garo — valued by him at \$200 — and presented it to the club. It now occupies a prominent place in the Artists' Room.

## Rau Art-Studios, Inc.<sup>3</sup>

THE Rau Art-Studios, Inc., a corporation organized under the laws of the State of Delaware, has purchased and taken over on December 1, 1916, the entire plant and fixtures, equipment, stock and good-will of the photographic business heretofore conducted by William H. Rau, at No. 238 South Camac Street, Philadelphia. Hereafter, the business will be conducted by this corporation at the same address, under the personal management and direction of Mr. Rau, as president and general manager.

## Convention of P. P. S. of New York

THE Professional Photographers' Society of New York will hold its thirteenth annual convention, February 26, 27 and 28, 1917, at the Hotel McAlpin, New York City. There is every promise of an interesting convention.

## Our Illustrations

(Continued from page 46)

The view of a country-road, page 41, is as attractive as one could wish. The lines are very pleasing, the values good and the atmospheric quality quite delightful. The only fault in this otherwise delightful picture is the extremely dark place in the upper left-hand corner. Data: October, 10.30 A.M.; hazy sunlight; Wollensak R. R. lens, F/8; 7½-inch focus; used wide open; ½ second; Standard Orthomom; Celeris developer; print on Artura Iris, Grade A; developed with Kodolom.

## The Photographic Club of Baltimore City

The following schedule of lectures will be given at the Club on the evenings noted below:

- Jan. 16. How to make Carbon- and Gum-Prints. By Messrs. Neeson and Frittita.  
Jan. 30. Another talk on the subject of lantern-slides. By Mr. Schapiro. He will go into the subject more extensively at this time and show how to make good Interchange-Slides.  
Feb. 13. Another talk on making enlargements. Also, in the near future, a practical demonstration on the use of the various styles of Graflex Cameras by a representative of Messrs. Folmer & Schwing.

## The Annual Pittsburgh Salon

THE Annual Pittsburgh Salon of Pictorial Photography will be held in the Art-Galleries of the Carnegie Institute, Pittsburgh, Pa., March 1 to 31, 1917, inclusive.

All prints submitted will be passed upon by an impartial and thoroughly competent Committee of Selection. Prints that possess the highest merits in artistic expression and execution will be hung.

The Pittsburgh Salon is distinctive in its annual exhibitions, being held in the spacious galleries of the Carnegie Institute.

Entry-blanks, containing full information and conditions of the Salon, may be obtained by addressing C. E. Beeson, Secretary, 1900 Frick Building, Pittsburgh, Pa.

Last day of entry, Saturday, February 10, 1917.

## Business Waiting To Be Secured

THE case of the amateur photographer, whose heart-rending cry is how to recoup himself for the expense of a roll-film or a box of plates, is no less pathetic than that of the professional who sits mourning in his studio because business is dull and the cash-drawer is empty. The sittings-solicitor has become a bore, and is *persona non grata* in nearly every community. But soliciting for sittings in a high-class studio can be done in several refined and effective ways. Two prominent members of a certain social club, in Boston, died recently, and not a photograph of either could be discovered by the relatives and the local daily press. Neither of these two wealthy citizens — over eighty years old at his death — had ever been in a photographer's studio. Nor was as much as a "snapshot" in existence. In this same club, there are other aged members who have never sat for their photographs. Whose fault is it?

## George W. Woodward

GEORGE W. WOODWARD, secretary and director of Sprague-Hathaway Company, Somerville, Mass., passed away at his home, 79 College Avenue, December 18, of heart-failure. Mr. Woodward was universally respected for his high sense of honor and noble impulses. He will be greatly missed.



## WITH THE TRADE



### New Eastman Publications

WE have received copies of four new booklets issued by the Eastman Kodak Company which are unusually attractive and valuable. One describes the Kodak Bank plan to obtain a Kodak, Brownie or Premo Camera. Another announces the new No. 00 Cartridge Premo, costing 75 cents, and made especially to provide fun for children and young people. A third shows the adaptability of the Kodak to winter-photography. The fourth is devoted to Premo Cameras and, typographically, is one of the best booklets that we have seen. All inquiries for these new publications will receive immediate attention.

### H. M. Bennett Visits Photo-Era

IT was with genuine pleasure that the Publisher greeted Mr. H. M. Bennett, president of the International Photo-Sales Corporation, of New York, during his recent visit to Boston. We were privileged to examine a number of excellent prints and enlargements made on Artatone Paper. Without doubt, Artatone is one of the most satisfactory and artistic of printing-mediums, and eminently suited to pictures for home-decoration or gifts of an exclusive character. We were also impressed by the optimism shown by Mr. Bennett regarding photographic conditions in general, and we believe his example to be one worthy of emulation.

### Flooding American Markets with Post-Bellum German Goods

ACCORDING to a report printed in the American press, and as coming from Berlin, the American Association of Commerce and Trade of Berlin has been investigating the rumors circulated abroad to the effect that Germany is preparing to dump quantities of cheap goods in America after the close of the war. The Association's *Weekly Report* finds that there is no surplus labor in Germany that could be diverted and produce the goods in question. Moreover, the supply of labor is insufficient to produce goods for home-consumption in view of the production of the vast quantities of war-materials needed, and wages of all workers have increased abnormally in proportion to the increased cost of living. Beyond supplying the actual needs of the government and civilians, manufacturers of steel, iron, hardware, household-goods and many export-articles of iron and steel are disregarding virtually all orders from neutral countries.

The same is true of dyestuffs, whose prices have risen considerably during the war. Makers are producing in larger proportion, however, chemicals, drugs and explosives. The entire range of textile-industries, which constitute a very large portion of Germany's economic activity, is now wholly eliminated from manufacture for export, owing to lack of the raw materials. Supplies of these are so short that they were long ago confiscated by the Government in order to conserve them for military requirements, and only such small quantities are liberated for the requirements of the civilian population as are absolutely necessary. How far all this is true of photographic products, is not stated. But why borrow trouble?

### Anso V. P. No. 0 Correction

AN inaccuracy occurred in the specifications of the Anso V. P. No. 0 in Anso Company's advertisement of this model in the December number. This camera is furnished with Actus shutter and Modico Anastigmat lens, F/7.5, at \$15, and with Extraspeed Bionic shutter and Anso Anastigmat lens, F/6.3, at \$25.

### Prices of Photographic Chemicals

ACCORDING to the *Photographic Dealer* (London), photographic chemicals are still a bit "jumpy" in prices; but this is not to be wondered at, having regard to the changing markets. Hydroquinone is not being manufactured in England at present, and virtually the only source of supply is America. There (in America) they seem to play all sorts of tricks with the prices, so that it is necessary to exercise more than ordinary caution in purchasing that product.

### Photograms for 1916

MESSRS. TENNANT & WARD, the American agents, inform us that the popular English pictorial annual, "Photograms for 1916," will be ready for delivery about the end of January, but with a certain degree of uncertainty. The prices will be — cloth, \$1.75; paper, \$1.25. Postage extra.

### Money for Advertising

THIS is the time when advertisers are busy preparing another excuse for not wishing to place an advertising-contract. Heretofore it has been, "Our advertising-appropriation has just been exhausted." Some unimportant advertisers have not even had an advertising-appropriation.

### Selling Photographic Magazines

WE have before us a letter from a dealer-friend who asks us to discontinue sending him PHOTO-ERA because it does not sell readily in his store. He hastens to explain that, personally, he believes PHOTO-ERA to be one of the best photographic magazines published; *but his customers do not ask for it*, and on that account he prefers to use his counter-space to better advantage. If this dealer pursued the same policy with regard to all the goods in his store, we do not believe that he would be as successful as he is.

The point of vital importance, which many dealers overlook, is that to push photographic magazines stimulates the customer's desire for the very goods which the dealer carries. The intelligent salesman should know each subject which his customer considers interesting, and it should be his duty and pleasure to call the customer's attention to such current articles in the photographic magazines as will help the amateur directly in his work. We have abundant proof that when photographic magazines are pushed zealously, *they do sell extremely well*, to the mutual profit of dealer, amateur and publisher.

"Th' ranks o' th' down and out are filled with men who nailed a horse shoe over th' door instead o' puttin' an ad in th' newspaper."—"Abe" Martin.





## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

THE AMERICAN ANNUAL OF PHOTOGRAPHY, 1917. Vol. XXXI, edited by Percy Y. Howe. Illustrated. Price, paper, \$1.00; cloth, \$1.50. Sole sales-agents: George Murphy, Inc., 57 East 9th Street, New York.

This, the thirty-third year of this popular American annual, finds the publication looking as prosperous as ever, with attractive material of benefit to all. Among the numerous illustrated practical papers are, "Marine Subjects," Wm. S. Davis; "Kinematograph-Hints," A. Lockett; "Gallery-Lighting," Sigismund Blumann; "Mastering the Anastigmat Lens," A. H. Beardsley; "Photographic Portraiture of Men," T. W. Kilner; "Needlehole Architectural Photography," A. M. Sutton, M.D.; "Waterfall-Photography," Harry G. Phister; "An Adjustable Copying-Stand," Henry F. Raess; "The Focal-Plane Shutter," A. L. Gareis; "Butterfly-Photography," Dr. R. W. Shufeldt; "Stereoscopic Photography," E. J. Wall, F.R.P.S.; "Color-Toning Bromides," A. T. Lakin, M.D.; "Autochromes," David J. Shehan, and "Halation Corrected in Development," Geo. D. Jopson.

The illustrations are profuse and varied. The most strikingly excellent are portraits by Dr. Kilmer, Belle Johnson, Wm. Shewell Ellis, Helmar K. Lerski, John W. Gillies, Knaff & Brother, S. W. Stump, Louis Fleckenstein, R. Duhrkoop, O. C. Conkling, Claude M. Simpson, Ira D. Schwarz; landscapes by Theodore Eitel, E. D. Leppert, John M. Whitehead, Rupert Bridge, Geo. L. Seymour, Harold Cazneaux, S. H. Willard and Karl H. Kattelmann; marines by Harry D. Williar and Wm. S. Davis; genres by W. B. Pointer, E. H. Weston, Warren R. Laity and Kate Smith; nature-subjects (butterflies) by Dr. R. W. Shufeldt, and waterfalls by Harry G. Phister. Useful tables for important technical work, and a list of American photographic societies, form the concluding pages of the book.

THE WOODCARVER OF SALEM — Samuel McIntire, His Life and Work. By Frank Cousins and Phil M. Riley. 202 illustrations. Octavo, decorated cloth, gilt top. Subscription-price, \$7.50. Edition limited to 900 copies. Boston: Little, Brown & Company.

That Salem, Mass., was at one time the city of education and culture par excellence in New England, is evidenced by the delightfully proportioned and admirably executed houses of her prosperous citizens in the days of our early presidents. In supplying the present unprecedented demand for designs for residences in the so-called "Colonial" style, America's leading architects turn for inspiration to Salem's domestic architecture — the homes erected and decorated by Samuel McIntire, the "Woodcarver of Salem." The original motives of this chaste and pleasing style, with its classic details in frieze, mantel, entablature and cornice, were derived from the Georgian style, in England, where Jones, Wren, Gibbons and Adam excelled in its highest development; but in adapting them to his needs, Samuel McIntire surpassed these brilliant exemplars by his artistic individuality. His designs were more classic and chaste, more original and imaginative and

incomparably more interesting. He was a carver of surpassing skill, a designer of classic tastes and an architect of sound judgment. His versatile genius is shown conspicuously in the Pierce-Johnnot-Nichols House, the Benjamin Crowninshield House, Assembly Hall, the Peabody-Silsbee House, "Oak Hill" and other old-time residences of historic old Salem. Our prominent architects acknowledge the debt they owe to Samuel McIntire, and praise the freedom, refinement, lightness and graceful dignity of his woodwork. The casual visitor to Salem is impressed at once by the hospitable doorways of the McIntire houses; and the refined, chaste and ingratiating beauty of the interiors — as described by pen and photograph in "The Woodcarver of Salem" — will be sure to attract many discriminating art-lovers from all parts of the country. The photographs of Mr. Cousins are excellent, and admirably adapted to the needs of the architect. The text, devoted to Salem's architecture, the life and work of Samuel McIntire and a detailed description of the principal McIntire houses, reveals a writer of delightful clearness and force, and of convincing authority. Mr. Riley has performed a conspicuous service for the architect and the layman, and the people of Salem cannot but appreciate this special distinction accorded their city. The volume is a superb example of the bookbinder's art in its perfect typography and tasteful, dignified exterior. The edition was entirely taken up on day of publication — a rare event in the publishing-business. Fortunate he who was able to procure a copy!

### Photographic Reading and Discussion

IN baseball-parlance, we often hear of the "winter-league," which settles the pros and cons of the baseball-world by reading and discussion around the stove in a country-store. To those interested in the great national game, this reading and discussion constitutes a veritable baseball-education. In the spring, the graduate is a walking encyclopedia of everything pertaining to baseball and those who play it.

Why could not amateur and professional photographers gather about the genial stove — figuratively speaking — to discuss and read the many interesting books and papers on photography? It is the spontaneity of such informal meetings that gives them a life and interest often lacking in clubs and at exhibitions. It is virtually certain that the information obtained so pleasantly and informally would not be quite so easily forgotten as that obtained from a formal lecture. Needless to say, the lecture, club and exhibition have their places of value — likewise the informal, unannounced and spontaneous "swapping" of experiences.

For some unaccountable reason amateur and professional photographers have the impression that books on photography are too technical. True, many of them are; but, likewise, it is true that many books are interesting and easily understood. Half an hour each day devoted to a reliable book on photography or art would supplement and increase the technical knowledge of amateur and professional alike. The dull winter-months offer the best opportunity to gather the information which may be a vital factor in the photographic success of the approaching summer's work. Those who read this may agree with the idea expressed; but it requires more than mere approval to gain the knowledge that lies at hand.

### Low Cost of Living

*Little housekeeper, to her friend at cooking-school — "Living-expenses in our family are very low. You see, my big brother makes mince-meat and kindling-wood of all who dare disagree with him."*





# RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported expressly for the PHOTO-ERA MAGAZINE from the Patent-Law Offices of Norman T. Whitaker, Washington, D. C., from whom copies may be obtained for fifteen cents in stamps.

Floyd L. Scott, of Buffalo, N. Y., a Camera-Operating Device. The inventor claims substantially as follows: An operating-device for a camera, having its shutter-mechanism provided with a trigger having an L-shaped outer end, comprising a clip provided at its opposite ends with right-and-left hand L-shaped sockets, one or the other of which is adapted to receive the L-shaped outer end of said trigger, and a timing-device connected with said clip. The number of this patent is 1,205,486.

Patent No. 1,204,098, for a Photographic Duplicating-and Enlarging-Apparatus, has been granted to George R. Watson, of Portland, Ore. Patentee claims as follows: In a reproducing-apparatus, the combination of a case having an exposure-opening; a removable slide covering the latter and having a supplemental-exposure opening; a removable slide covering the latter and having a supplemental-exposure opening controlling the area exposed; means for moving a ribbon having a sensitized surface across said exposure opening of the case, and a removable roller over which said ribbon is drawn by said moving means, such roller being provided with means to mark on said ribbon the dividing-line between the adjacent-exposed areas.

A Photographic Roll-Holder has been patented as No. 1,204,011, by John S. Greene, of Rochester, N. Y. The gist of the inventor's claims is as follows: In a roll-holder for photographic cameras, the combination, with a box or casing, of two relatively spaced flanged rollers arranged therein at each end near the bottom thereof; a film-spool arranged in the casing, and having the rims or edges of its end-flanges resting upon the rollers, to revolvably sustain a roll of film wound on the spool by revolving against the rollers as the film is drawn off; said rollers being so arranged as to position the spool with its flanges out of contact with the bottom-wall and the two side-walls of the casing, and protuberances on the end-walls of the casing engaging the end-faces of the flanges of the spools to hold them in position on the rollers.

Ernest C. Scudder, of Farmington, Ill., a Photographic Printing-Frame, which he claims as new, is substantially as follows: A photographic printing-frame comprising a base, a cover hinged thereto, means to secure a sheet of sensitized paper to the base, a negative carrying-frame movably mounted on the cover, and means for moving said frame to dispose the latter in different positions with respect to the paper to be printed. Number of this patent is 1,203,917.

A Photographic Apparatus, by Henry J. Gaisman, of New York, N. Y. The number of this patent is 1,203,603. The inventor claims, as his invention, a camera provided with an opening to permit the production of designating against a contained sensitized element, and a protecting member, carried by the camera, and movable relatively thereto, parallel with the plane of the camera-wall, said protecting member being adapted to cover and expose said opening in different positions of adjustment of said member, with means to retain said member over said opening for

excluding light therefrom. Mr. Gaisman has assigned his rights to the Eastman Kodak Company, of Rochester, N. Y., a corporation of New York State.

Patent No. 1,205,039, for a Film-Cleaner, has been patented by James E. Singleton, and Samuel T. White, of Greenville, N. C. The gist of the inventor's claims is as follows: A film-cleaner, comprising a pad-holder having upper and lower members, between which the film is drawn; said members having inclined-confronting surfaces which are farther apart at their edges than at their intermediate portions, whereby they are adapted to grip the intermediate part only of the film, and permit the edges of the film to pass freely there between, and means to secure a flexible strip or pad upon each of said surfaces.

Marcus C. Hopkins, of Jersey City, N. J., a Motion-Picture Apparatus. What the inventor claims as new is substantially as follows: In a motion-picture apparatus, the combination with a film-feed of two oppositely rotating transparent polygonal refracting bodies, each having an even number of faces and disposed upon opposite sides of the film; substantially as described. Number of patent is 1,204,771.

A Motion-Picture Screen, and Process for Making the Same, has been patented by Axel T. Jacobsson, of Milwaukee, Wis., and patented as No. 1,204,775. The inventor claims substantially as follows: A screen for exhibiting motion-pictures, consisting of a piece of fabric coated with pyrolin and a filler to form a flexible fireproof backing, said backing having an adhesive dressing applied thereto; and a layer of small glass pearls partially embedded in said dressing.

Patent No. 1,204,506, for an Automatic Camera-Trip, by Frederick W. Smising, of Detroit, Mich. The gist of the inventor's claims is as follows: A device of the class described, having an automatic tripping-device for cameras, an attachment for said device comprising clamping-arms adapted for attachment to said device, and jaws carried by said arms and adapted to embrace a portion of the camera-button, to hold said device in longitudinal alignment with said camera-button.

Adolph F. Gall, of West Orange, N. J., has invented, as No. 1,204,425, a Lens-Supporting Device. The inventor claims a lens-supporting device, comprising a support, an arm mounted on said support, a lens-carrying element, means to support said lens-carrying element from said arm comprising a member, adjustably secured to said arm for sliding movement in one direction with respect thereto, and means to adjust said arm on said support in a direction parallel to the direction of the sliding movement of said member, substantially as described. The inventor has assigned his rights, by mesne assignments, to New Jersey Patent Company, West Orange, N. J., a corporation of New Jersey.

## To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect.



## LONDON LETTER



THE members of the Linked Ring are again to be congratulated on the all-around success of the Salon and its results. The Red Cross has come in for quite a good amount, as without exception every exhibitor agreed to give half of the selling-price of his pictures, and the sales this year beat the record.

The pictures with a patriotic tendency were the best sellers. Mr. Mortimer's, which belonged to this class, were all sold, and duplicates of each as well. Child-studies were also favorites this year, to judge by the little red "sold" labels; and one of our own, called "Four Children in War-Time," was sold four times over. It was one of a series we had done for an American journal, to give a little picture of the kind of life many of our English children lead nowadays.

A case of one photographic literary man buying the work of a fellow photographer-writer was recorded in the sale of Mr. Filson-Young's very clever parody of Whistler's well-known portrait of Carlisle to Mr. G. Bernard Shaw. Mr. Max Beerbohm poses as the sage, and his expression—protesting, yet amused—is the point of the joke.

In this third year of the war, this Salon has not only exceeded any previous Salon in the matter of entries, but the attendances and sales have been better than many of the best years in the past. It is a remarkable triumph, when one remembers that not only are the German and Austrian exhibits missing, but it is not so easy as in peace-time to get work from neutral countries. From a most reliable source—almost the fountain-head—we learn that the Salon's financial position is so strong that already next year's show is assured.

It would be interesting to know what has become of those dissatisfied spirits that broke away and founded themselves into a society called the London Secessionists. Nowadays, their name is not even known; but at one time they were a concrete enough body to hold an interesting little exhibition. It always seems a little sad when a secession fizzles out; still, as the Salon itself is a secession, perhaps it is not yet ripe for further splitting up.

Much interest has been aroused by and in the notable medical discovery of a new way of taking photographs of internal organs. This is the work of one James Shearer, at present a sergeant in the R. A. M. C., employed at a casualty clearing station in France. He is a Scotsman by birth, but received his education in the United States, where he graduated an M.D., Ch.M., at the university at Washington. He asserts that it is possible, in broad daylight, to take detailed pictures of any organ of the body, even the brain, kidneys, liver or spleen, and to see at a glance where they are deranged. In describing the invention the *British Medical Journal* says:

"The process of producing these pictures is not impressive. There is no darkening of rooms, no flashing of lights and no crackling of spark-gaps. In fact, the whole proceeding is so brief, and seemingly so simple, that when the results are observed the first sensation is one of bewilderment. A patient is laid on a plain deal table (insulated by standing it on glass), a little ticking is heard in a cupboard hard by, and after sixty seconds or so the bearers are directed to move him. Nothing has been felt by the patient, little or nothing has been seen by the bystanders beyond what has been noted, yet a visible record of the outline of a living organ has been conveyed to a wax sheet."

If the facts can be substantiated, the result will be a simplification of the whole technique of X-ray work, and obviously a more accurate diagnosis. When we realize the enormous number of clever young medical men who have joined the army in their professional capacity, and are at the present moment having an unlimited amount of practice, the wonder seems to be that more startling discoveries of this description do not come to light.

The Secretary of the War Office has published the following notice relating to the sending of photographs to neutral or enemy countries:

"Pictorial illustrations and photographs of all kinds, whether on postcards addressed to neutral or enemy countries, or enclosed in letters so addressed, and whether the illustration itself does or does not represent an object of interest to the enemy, will in future be stopped by the Military Censor, except . . ."

This sounds fairly drastic; but the exceptions which are given under three headings, and are too long to include in these notes, make the sending of all legitimate illustrations or photographs, if carried out in the proper way, comparatively easy. For instance, photographs enclosed in letters or other postal packets by persons or firms who have occasion, in the ordinary course of their business, to despatch such articles to their agents or customers in neutral countries, can send them as usual; but, after being addressed and stamped in the usual way, they must enclose the packet in an outer cover, which need not be stamped, addressed to the Chief Postal Censor, Strand House, London, and after being inspected and found harmless, will be forwarded by him to their destination.

The kinematograph is steadily pushing deeper into our lives. We have had much controversy lately in the papers as to its injurious effect on the young when the wrong sort of stories are told, and pictures shown. Now it is to be enlisted on the side of morality, and at the Philharmonic Hall a private exhibition has lately been given of a film entitled, "Where are my children?" which is a social photo-drama dealing with some of the causes and effects of the declining birth-rate. The film is produced in Great Britain with the general approval of the National Council of Public Morals, on condition that it be exhibited to adult audiences only and in special halls. So here we have the National Council recognizing and using the kinematograph as a means to promote its object, which is the spiritual, moral and physical regeneration of the race. There is bound to be adverse criticism; but this new departure certainly opens the door to further and extensive developments of an elevating character; and if it is true, as so often stated in print, that many young people are demoralized by the "movies," we shall at least have the satisfaction to know that there is a beneficent as well as a malign side to the picture-palaces, which may ultimately counterbalance the harm done.

The films of the Somme Advance have probably been shown in nearly every "cinema" hall in this country. As we write, they are on view in our own Kentish village, and all the village is flocking to see them. They may certainly be classed among the educative films, for it is good that stay-at-homes should be shown something of what the front in France is like, and here we get at times a suggestion of the mud and dreariness of it all; and the indomitable spirit of our men is shown, where the Hampshires are moving up to the front, a limitless procession, winding along a flat road. We have no knowledge of how far these films are posed. Now and again the photographer within us is sure, by certain little things, that a particular picture is faked.

CARINE AND WILL CADBY.



*Photo by L. E. Loebel*

## Through and Over—

with most of his lens troubles is the amateur who is equipped with a

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The Tessar is meets and over-comes the ordinary. Besides the great Tessar Ic (F:4.5 times that of the linear, this lens field in proportion

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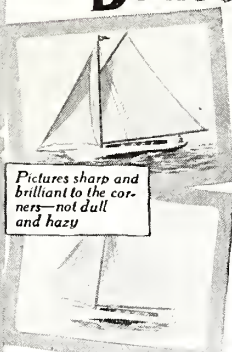
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## THE Bausch<sup>and</sup> Lomb BALOPTICON



*Pictures sharp and brilliant to the corners—not dull and hazy*

enables you to show your photographic triumphs with more pleasure to your friends, and to far better advantage than an album or loose prints. You can use actual photographs or lantern slides—there are models of the Balopticon for either method—and for both methods, in combined models.

### Economical, Simple, Satisfactory

The illuminating equipment of the Balopticon—our adaptation of the new gas-filled Mazda lamp—shows marked superiority in illuminating power, in simplicity of operation and in economy of current. The mechanical construction is durable and the price moderate.

Models for use with slides \$25 and up—for projecting opaque objects (photos, postcards, specimens, etc.) \$35 and up. Combined models, with instant interchange, \$45 and up.

Write for our interesting booklets about the Balopticon—and about slide making.

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## LIFE-STUDIES

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and  
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FOR USE IN PLACE  
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By painters, illustrators, architects, designers, art-students and photographers in high standing. Not sold promiscuously. Endorsed by connoisseurs for beauty and refinement of pose, excellence of photographic technique and sincerity of purpose.

These are direct, black photographic prints on double-weight paper. There is no catalog, samples are not submitted nor are sets sent on approval; but they are sold under the PHOTO-ERA Guaranty, which every reader knows is an absolute assurance of satisfaction in every respect.

Sets A, C or O, 20—5 x 7 Prints; Sets B, D, E, F, G, H or I, 12—8 x 10 Prints  
\$5.00 each, sent by Express; with Photo-Era, 1 year, \$6.00

PHOTO-ERA MAGAZINE, 383 Boylston Street, Boston, U. S. A.

## An Examination

CURIOSITY, say the scientists and the psychologists, is the most prevalent characteristic of the human race. On it depend, and from it take their source, all learning, all science and all invention. The great inventors are the curious ones. On curiosity depends all advance; nothing stays still. Therefore, I am going to try to set down here some things that I have found out from reading and from practice. If I could tell every one how to *know* photography, it would do a great deal more good than instruction-books. Don't learn from instructions; learn from science. Know *why*.

How many of our "promiscuous snapshooters" know that, once taken, nothing short of a tack-hammer ruins a plate *irreparably*? How many of our learned authors who preach the antipathy of developer to the thiosulphate-bath know that a plate may be totally cleared and yet so intensified that a good print may be made from it?

The general impression is that it is the combination of light and developer that reduces the silver. It is the light that reduces it; the developer merely so intensifies it that the eye can see the silver ions. Although invisible before, they were none the less present. Sodium thiosulphate may be introduced into the developer with the result that the unreduced (by light) silver bromide will be dissolved and carried to the reduced silver, virtually silverplating the ions. This combines the processes of intensification and fixing.

Without a doubt, you have either made or seen a carbon print, a gum print or any other of the innumerable processes in which the properties of bichromated colloids are made use of. So has every one else; but how many persons would be able to place the cause of their strange insolubility to oxidation?

Study photography, not as a process, but as a science. Some professors place it at the head of the list of useful sciences; but all remark on its slow advance. One cannot be a competent photographer without a knowledge of chemistry and optics. Understand your lens. At least, be *able* to compound your own formulae; even know the source of your chemicals. You will get more from your camera if you do.

It has been said that technically — even, to a measure, artistically — the all-important components of a perfect picture lie in the lens and in the darkroom. Know, therefore, your lens and your chemicals.

What do you know about the source of those little packages that you dissolve with such abandon? How many of these questions can you answer?

From what, and how, is pyro made?

How is sodium thiosulphate, your commonest chemical, made?

Given the apparatus and chemicals (what are they?), could you make a dryplate?

What becomes of the elements contained in the emulsion, after exposure? What are they?

What does sodium carbonate find a use in? Why?

If sodium sulphite, alone, will "develop," what is the use of metol, ortol, hydrochinon, pyro, etc.?

Why is the emulsion heated before coating?

Why could n't a wetplate be used dry? Why were wetplates slower?

Why does a plate, sufficiently overexposed, develop positive instead of negative?

Can you explain the action of a sepia redeveloper?

Why does potassium ferricyanide reduce, and what part does the thiosulphate play in the reduction?

Do you pass? These questions are simple, but they go right back to the epoch-making discoveries

that have made for speed and for convenience in amateur and professional photography alike. A hundred years ago half of them could n't be answered at all and the others only by learned men. To-day, they are within the reach of every man with enough money to own a camera, and it is not fair to yourself not to take advantage of it. Think it over.

D. V. THOMPSON, JR.

## The High Price of Paper



H. J. Westerman

The young lady across the way says that with the price of paper so high it must be awfully annoying to the newspapers to have to give up so much space to advertisements.—*Boston Traveller*.

Each of us photographic publishers earnestly wishes that he might have more of those space-filling advertisements.

## A Retouching-Note

WHEN sharpening a pencil for retouching purposes, the wood should be cut to a very much longer taper than is ever seen in the ordinary course; in fact, at least two inches of the total length of the pencil should be tapered, so that the eye is guided to the point, and this can be put down upon the exact place where it is required. The lead should be tapered as well as the wood. This may be done at first with the knife, following up this by rubbing on a piece of very fine glass paper, and giving a finishing rub upon a piece of smooth writing-paper. By the use of loose leads and a magazine-pencil, most of the trouble of sharpening can be avoided; but the necessity of getting the lead to a fine point and maintaining this will remain. Having taken the trouble to give the pencil the required form, one will do well to keep it for that particular purpose only, and when it is not in use to keep it where it will not be likely to be pressed into ordinary service.

L. B. WELLS.



## Burnishing Prints To Give Them a Good Surface

BURNISHING a print is not often practised by the amateur, but it is a simple way to give a mounted glossy print a good finish. As a burnisher is often confused with a hot roller, it may be well to point out that, in burnishing, a roughened roller drags the print face downwards over a highly polished heated steel bar; whereas in hot-rolling the print is passed between two heated polished rollers. Burnishing gives a much higher gloss.

Care must be taken to keep the bar of the burnisher bright and free of scratches. Should it get scratched, it must be repolished, first with very fine emery paper, and then with emery and rouge. This is a lengthy process. It is much easier to see that the bar is kept right from the first. It should be stored where it will not get rusty, wiped before being put away, with a cloth with a trace of oil on it, and wiped before use with a clean cloth.

Prints to be burnished should not have their mountant absolutely dry, but they should not be perceptibly damp. If they cannot be burnished the day they are mounted, they may be put away in a pile, with a clean piece of blotting paper between each pair. They will then be in a fit condition the next day.

The surface of the print needs lubrication. Twenty grains of Castile soap, cut into shreds and dissolved in four ounces of methylated spirit, make a suitable lubricant, which will keep any length of time in a well-corked bottle. A few drops of this are put on a clean rag and rubbed over the face of the prints in succession. By the time half a dozen have been done, the first will be ready for burnishing. Each print should be passed through the burnisher three or four times in succession. It should be bent back a little while putting it through, so that its face is somewhat convex, and it will then come out quite flat. There should be no pause in the passage of the print over the bar, or a mark will be left.—*Photography*.

## Sorting and Storing Bottles for Photographic Work

THE photographer who is also a practical economist will find it a good plan to examine carefully all bottles which pass through his hands, and to keep all that are likely to be of any service in connection with his photographic activities. The bottles to be kept should be thoroughly cleansed, dried and then classified according to shape and size. Bottles having comparatively wide open tops, and varying in capacity from one to four ounces, are particularly useful for chemicals in the form of crystals or powder. Small bottles with narrow necks are worth saving for small quantities of solution; they can also be converted very easily into "drip" bottles—a valuable adjunct to any darkroom equipment. Special bottles of green or blue glass, and either hexagonal or octagonal in shape, should be reserved for acids and for solutions of a poisonous character. The go-ahead camera-man of the present day often needs to purchase comparatively small quantities of chemicals, either for experimental purposes or for special work. In such circumstances a good stock of clean, ready-for-service bottles, from which one of the exact size required can be selected instantly, will not only prove to be a source of gratification to the owner (by preventing confusion and loss of time), but will save the twopence, threepence or fourpence—as the case may be—which the photographic dealer, in view of the prevailing restricted output of all kinds of glassware, will be well justified to charge. For a long time past, it has been the practice

in the writer's household, before any bottle, jar or other receptacle has been finally disposed of as apparently of no further value, to submit it to him, with the question, "Is this of any use to you for your photographic work?" The practical value of this simple domestic courtesy has been amply confirmed in practice, and the plan is accordingly commended with confidence to the attention of other workers.

F. H. B. S., in *The Amateur Photographer*.

## Geological Survey-Maps

THE extent of the serious and accurate work that is being done in the various industrial and scientific departments of the United States Government, at Washington, is not known to the general public; and this, despite the fact that this work is carried on at great public expense, by skilled experts, and for the sole benefit of the people. One of the most valuable of these governmental activities is the Geological Survey, of which George Otis Smith is director. Among the other important charts or maps of various kinds produced there, are those showing the topographical character of every state in the Union. They are prepared with the utmost scientific accuracy and technical skill, and are supplied at a merely nominal price to the public—on application, or through the general bookstores. Of great convenience to persons interested to know the surface-character of a certain region, including tourists, automobilists and camerists, are the sectional maps, in quadrangular form, of the various states. The larger the geographical area of a state, the greater the number of these sectional maps.

Thus, the State of Massachusetts has 54, Connecticut, 41, and Maine, 54, although, like many of the larger states, Maine has not yet been entirely surveyed; but as soon as a new section has been completed, a corresponding sectional map will be issued by the department. Of the New England states, the section maps of Massachusetts, Rhode Island and Connecticut are completed. In each of these quadrangular maps the searcher will find, plainly indicated, every elevation from the highest to the lowest, together with its height in figures, all the principal streams, lakes and ponds, and every railway and carriage-road.

The maps vary in scale. Most of them are about 1 mile to the inch. These include about 220 square miles. Others are 2 miles to the inch, including about 440 square miles, and some of the western maps are 4 miles to the inch, or about 900 square miles.

Any standard map, measuring 13 x 17½ inches, can be purchased at almost any first-class bookstore for fifteen cents, or will be forwarded, safely encased in a stout pasteboard tube, and postpaid by Uncle Sam, on receipt of ten cents in stamps or United States money-order. The valuable service thus rendered to the people of this country by the Geological Survey merits sincere appreciation, and as the Publisher of PHOTO-ERA has had occasion to procure a number of these sectional maps of the State of New Hampshire, which he has found extremely useful and accurate, he regards it as his duty to bring the matter to the attention of his readers.

## The Resourceful Waiter

*Lunchconer (photographer)*—"Look here, waiter, I'm very sorry, but I've only just sufficient money with me to pay the bill, and nothing left for a tip for you."

*Waiter (confidentially)*—"Would you mind just letting me 'ave another look at the bill, sir?"

*London Mail.*





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A. H. BEARDSLEY, Assistant-Editor

KATHERINE BINGHAM, Editor, Monthly Competitions

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MLLE. PLASKAVEITSKA  
T. E. HALLDORSON



# PHOTO-ERA

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No. 2

## Nature-Studies With a Camera

WILLIAM S. DAVIS

**T**HERE is no doubt that the widespread development of amateur-photography has been the means to awaken in many persons a love of the every-day beauties of nature by revealing interesting details which had formerly been passed by without a thought. After interest has been stimulated, the possibilities of the camera in providing reference data illustrating different stages of plant, insect and animal life, or pictorial renderings of natural forms, become more obvious—then the question naturally comes up as to the best way to handle the various subjects in a satisfactory manner; so, in compliance with the Editors' wishes, I am offering some suggestions.

### About Apparatus

While a clever worker will frequently accomplish astonishing results with really unsuitable apparatus, it is every way better for one who takes a serious interest in the subject to use a camera and accessories adapted to the varied requirements met with when much of a field is covered. For all-round use a long-bellows camera with screen for focusing is the first thing essential, for while a certain amount of work can be done

with the aid of supplementary-lens attachments as a substitute for lack of a long draw, those who have tried both ways know the advantage of more complete equipment. In general, a back-focus view-camera is the most desirable type, owing to the fact that when making studies to an exact scale the distance from lens to object can be maintained without change while the fine focusing is being done. However, the more common form of folding hand- and tripod-camera with double or triple front-extension bed is quite capable of meeting requirements, the main thing being a bellows-draw at least double the focus of the lens employed—thus allowing one to take

small objects life-size, or larger. The size of apparatus is mainly a question of taste, depending upon whether the negatives are wanted for direct printing or enlargement, so the only comment I might make is that the image is more trouble to focus on the screen of a small camera, while too large an outfit is a burden when taking long tramps afield.

If one's activities are to be extended to active insects, small animals, etc. (which are often difficult to keep in good focus at close range), a long-focus reflex would undoubtedly prove of much value; but not



SNOW-TRACERY

WILLIAM S. DAVIS



having followed up this branch of the subject sufficiently, I will not presume to offer detailed advice.

As to lenses: A good R. R. will answer perfectly, unless high-speed work is attempted. Of course no objection need be made to an anastigmat, if cost is not an object, but the superior optical correction at large apertures is not often available when photographing plants, and the like, because it is necessary to stop down as a rule to obtain sufficient depth-of-definition in the various planes, and when that is done the R. R. leaves nothing to be desired in the matter of sharpness.

Since it is sometimes desirable to take small objects exactly life-size, it is a good plan to focus once very carefully upon anything of known size, and make a permanent mark on the camera-bed to indicate the extension required — then all that is necessary in future is to clamp the front at the correct position and move the camera back and forth until the subject appears sharp, remembering when making an image the size of the object that the distance between lens and subject and lens and plate is equal. If a magnified image of some object is wanted a supplementary "copying and enlarging" lens can be slipped over the regular one, thus giving an enlargement of several diameters when a long-bellows extension is available.

A stiff tripod capable of telescoping down to a low elevation is needed.

Two ray-filters are desirable — a light one requiring but three or four times increase in exposure, and another of about eight-times depth, which will give full color-correction. Such filters as the Ingots, series "A" and "B," or the Cramer "Isos" II and III, meet these specifications.

For general purposes a good brand of rapid orthochromatic plates, preferably double-coated, will be found suitable; but to secure the highest quality results when dealing with deep reds a trichromatic or panchromatic variety, together with adjusted filter, is necessary.

Among various accessories useful at one time or another are the following:

A piece of mirror the size of the focusing-screen is a great convenience when the camera must be placed near the ground, for by holding the mirror at an angle close to the focusing-screen the reflected image (right side up) can be seen from above.

A simple iron vise, obtainable at hardware stores for about a quarter, when clamped to a board, table-edge or other support, will hold cut tree-branches in a natural position.

Some light pointed stakes, or stiff wire rods, together with a few yards of "cheese-cloth" and

gray muslin, will serve a variety of purposes. In combination they can be made into a wind-break, background or awning for diffusing too strong light; while the rods alone will help overcome the effects of wind upon tall plants when placed unobtrusively back of the stems and the latter tied in place with dark thread.

For indoor work it is necessary to have some plain backgrounds, and, as the average specimens do not require large ones, full-sized sheets of photo-mounting paper in several shades of gray, also black and white, answer well. When in use they may be pinned to an artist's wooden stretcher, drawing-board or piece of cardboard. A good deal of tonal variation is obtained from each tint by tilting the sheet at different angles toward, or away from, the source of light.

### Working Out of Doors

Field work tests the photographer's skill in obtaining studies which are pleasing in composition and satisfactory in technique, because many of the subjects differ a good deal from ordinary landscapes in character. Owing to the greater difficulty of controlling the lighting and avoiding vibration from wind, it is better to bring small, delicate specimens indoors when circumstances permit, but such treatment cannot, of course, be adopted if we wish to show a subject in its natural environment. Obviously, a quiet day is most favorable for making plant studies in the open, and as a rule a diffused light is also desirable, since strong sunshine so often gives spotty contrasts and obliterates fine details in the highlights unless great care is taken. Sometimes, however, very beautiful effects can be secured on bright days by working in early morning or late afternoon, when the sun is low.

As all workers have their own ideas of what features they wish to bring out, the selection and arrangement of material must rest mainly with the individual, but it is always desirable, especially from a pictorial standpoint, to keep the natural background simple in mass and enough different in tone to afford some contrast with the principal portions of the study. Also — don't try to show too much material in one picture. Even when a considerable mass of wild plants are represented amid their natural surroundings, it is well to single out one plant, or a small clump, and make it more prominent than the rest — thus creating a focal point of interest.

The direction from which the light falls, together with atmospheric conditions, has much to do with producing desirable gradation and effective contrasts, without harshness. For straight rendering of fine details a soft side lighting is best, but not infrequently one will find

it an advantage to work somewhat against the light, as this at times has the effect of emphasizing nearby parts and flattening the background. The still-life of a pumpkin and field-corn with apples ("From Field and Orchard") shows this, for the shape of the pumpkin and mass of tree trunk are rendered with better tonal contrast on account of being partly in shadow, while the sunlight glancing across the other objects brings out their texture in a natural manner. This was taken at 2 P.M., in November, with hazy sunlight falling toward the camera at an angle of about forty-five degrees. "Plum-Blossoms" is another example of working against the light, being made late on a May afternoon. The two studies of a fern at different seasons were secured in a diffused general lighting, as the subject was located on the north side of a building shaded by overhanging trees, making the conditions similar to those found in the woods, except for the artificial backgrounds, which were used to bring out details more clearly. On some occasions I have obtained very delicate effects by exposing during a thick fog, which made the background appear exceedingly soft without lessening the desired detail in foreground objects.

From the foregoing the reader will make no mistake in assuming that it is desirable to take advantage of varied conditions for different subjects, especially when consideration is given to the pictorial possibilities.

When arranging for a "close-up" study try to have the principal parts as near in one plane as possible without crowding the components un-



CHERRY-BLOSSOMS

WILLIAM S. DAVIS

naturally. This renders focusing easier, and permits the use of a larger lens-stop. To get the maximum depth-of-field at any given aperture, note the nearest and furthest parts of the view which should appear sharp — then focus with lens wide open upon a point somewhat beyond

the nearest object (usually about a quarter or third of the distance between parts), after which stop down by degrees until the desired definition is seen. On account of the difference in separation between parts in various subjects the size of stop needed may range from nearly full aperture down to F/45, but more often will be F/16 or 22. Of course it is not necessary, or even desirable, as a rule, to bring the background into perfect focus, as some softness helps to separate it from the subject.

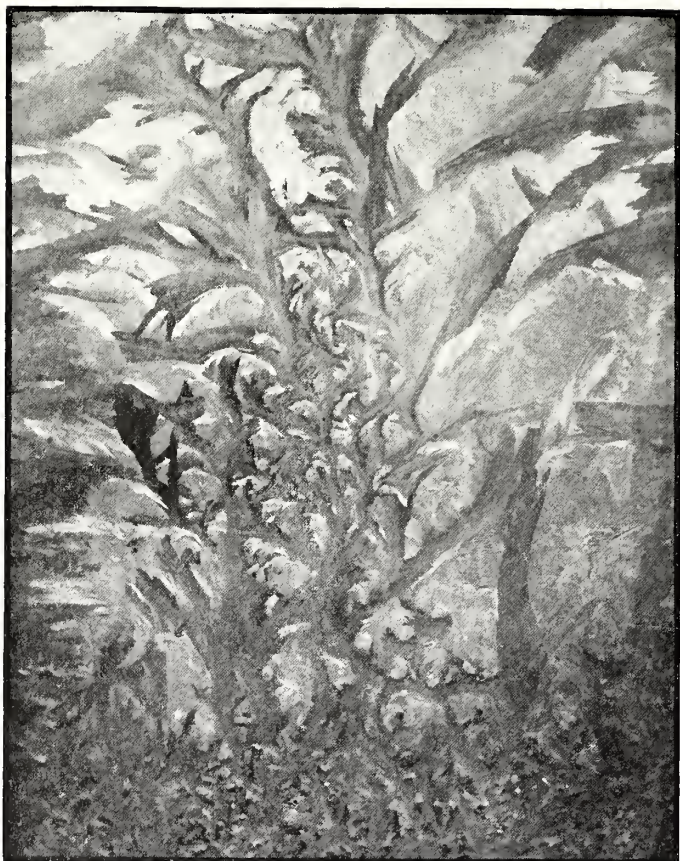
It is certainly an advantage to use a ray-filter upon the majority of subjects, especially when there is a decided mixture of positive colors, or orange, crimson and light blue appear, but unfortunately its employ-



PLUM-BLOSSOMS

WILLIAM S. DAVIS





FROST ON THE WINDOW-PANE

WILLIAM S. DAVIS

ment must depend to some extent upon whether fickle breezes allow the necessary increase in exposure being given with safety, for full exposures are required in any case to obtain a first-class rendering of tones and shadow detail, and the more contrast is present the greater proportionate increase in length of time necessary.

A good exposure-meter is a decided aid in timing the exposures, but on account of the nearness and color of most objects the reading indicated upon the meter dial must be multiplied several times. An approximate idea of the exposures needed under various conditions can be had by reference to the data furnished with the illustrations, which appear on another page.

When it comes to dealing with insects, or small animals, in the open, one's personal knowledge of their habits will prove the best guide in suggesting ways and means of securing pictures. Many insects are quite sluggish on cool mornings, while in other cases the noonday heat of a summer's day produces a similar effect, and it is acquaint-

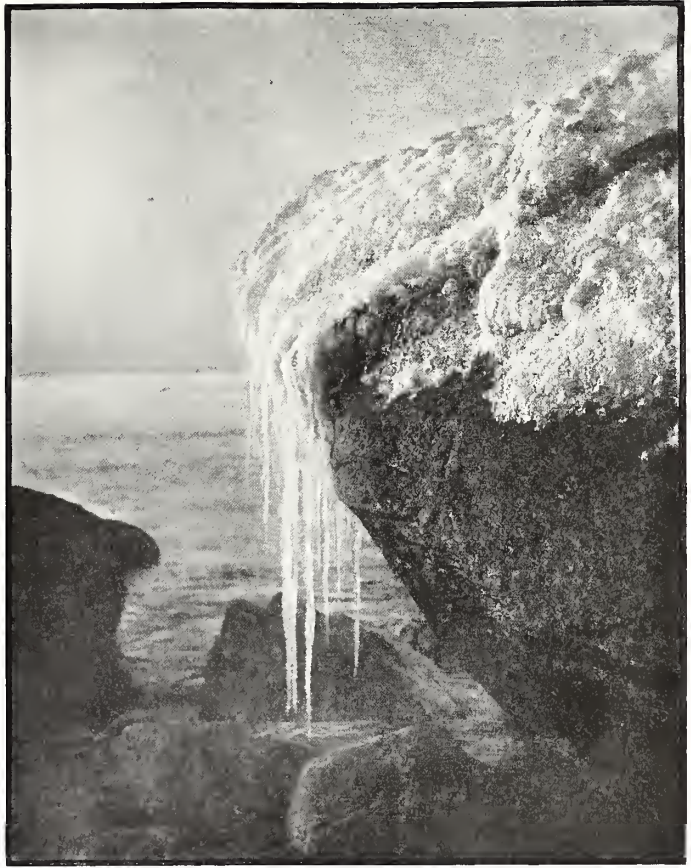
ance with such points which enables a worker to handle this class of subjects most successfully. A good way, when possible, is to capture the specimen first — focus upon the spot in the composition where one wishes it to appear (in the case of an insect, a flower with which it is associated, for instance) — then place in position and expose quickly.

#### Indoor Work

As previously mentioned, many studies may be made better indoors, because conditions are under full control, and it is possible to arrange the material in a leisurely manner. Consequently it is suggested when large-scale studies of such subjects as sprays of flowers, tree-leaves and small insects are desired, that the material be brought in from the field, for such pictures admirably supplement more general views of the subject-matter made amid natural surroundings.

Small plants or flowers can usually be arranged in ordinary vases, jam glasses or tall narrow-necked bottles, according to circumstances.





ICE-CROWNED

WILLIAM S. DAVIS

When composing a decorative group I have even used a row of olive-oil bottles, placing a single spray of flowers in each, to facilitate changes in grouping.

If several stems are placed in one holder it is often necessary to use some packing to keep them in the desired position. Cotton, or wads of tissue-paper, serve well, also sand and wet clay.

Cut specimens should be kept in water an hour or so before photographing, as some plants droop quickly when first cut, but recover their natural stiffness after standing in water awhile.

For study purposes it is very desirable to show the subject from several positions, either in separate pictures, or by arranging a group with that object in mind — flowers, for example, being placed to show front, profile and back views, in addition to buds and partly opened blossoms.

There is an opportunity for many interesting experiments in lighting, besides pictorial grouping, for one may work against the light — turn back

to it for flattening the effect — or, when ordinary side lighting is chosen, control the scale of contrast by bringing the group nearer the window to increase it, or move further away to gain softness. In my illustration of "Cherry-Blossoms" I wished to render the light through translucent petals — a charming effect in nature when the branches are seen against a flat-toned background of sufficient contrast. To facilitate working, a branch was brought into the studio and clamped in a vise attached to a spare tripod placed about eight feet from the north light, and considerably below the level of the window-sill, the latter being some five feet from the floor. (Similar lighting is readily obtained by screening the lower half of an ordinary window.) A very pale background was then set between the subject and window, but low enough not to shut off any light. This allowed the lens to be pointed directly toward the light without including the window. Some diffused light from the side helped to soften the shadows, but even with this help

several times the normal exposure had to be given to register detail in the darker parts, so a double-coated plate was used to better preserve the long scale of tones present.

Insects can often be handled with advantage indoors by working close to a window and letting plenty of light fall upon the subject, for if the parts are kept in nearly one plane a large stop can be used, thus making quite short exposures allowable. When working in this way specimens can be kept in a cool, dark place until wanted — then when gently set in position they will usually remain long enough for an exposure to be made, or in case of failure the first time one can recapture them — something not always easy out of doors. In the case of my butterfly illustration the flowers and apparatus were all made ready, then the butterfly brought on the scene of action while still in a decidedly dormant state, having been found on a cool morning in late autumn.

Sometimes it is desired to take a detached object, like a beetle, sea-shell, etc., in such a way as to avoid cast shadows. To do this, fasten the object with a touch of glue or gum to a sheet of glass (either clear or ground), and stand a foot or so in front of a suitable background, which must be evenly lighted. Another way is to lay the specimen on a piece of glass supported in a horizontal position above the background. This, of course, necessitates using the camera in a vertical position, but a ball and socket clamp attached to the tripod, or edge of table, will furnish the means. Translucent specimens are shown to good advantage by reflecting light upward through the glass from a strongly illuminated white ground or mirror; while by using a clear glass tray such things as sea-moss may be shown floating in water.

#### General Suggestions

To make a collection most effective from the start for study purposes, I would certainly advise

confining one's efforts to securing a good series of a few specimens, rather than attempting a wider range in a desultory manner. By way of example: A full series of a tree (or at least one species) should commence with one picture when the branches are bare (the presence of snow would add beauty in this case), next, when the foliage appears, including detail-studies of a branch, or few twigs, to show clearly the leaves and their grouping; this, also, being a good time to get a near view of the boll and roots. If of the blossoming species, the flowers call for individual attention, and later the fruit. In certain instances a final view in autumn as the leaves commence to fall may show quite different characteristics than

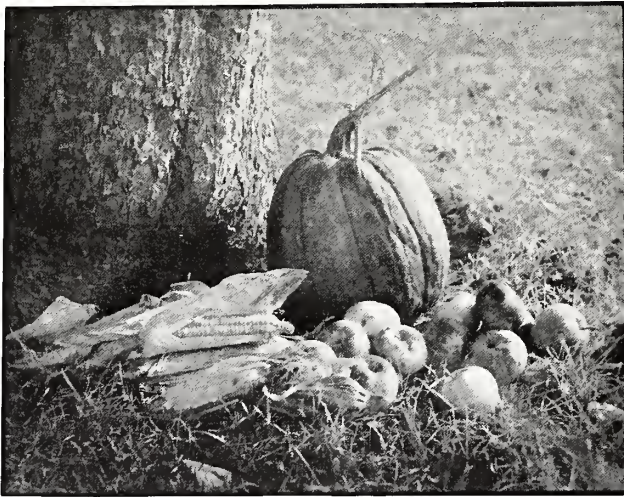
one taken in springtime, although without the aid of color it is not always possible to render the difference clearly. The two studies of a fern at different seasons illustrate the idea as applied to plants.

The practical usefulness of any collection depends considerably upon system in filing material, and consequently a method

should be followed which allows the insertion of fresh subjects in their proper places. One of the easiest is to secure a portfolio of suitable size and make a set of inside wrappers by folding pieces of any tough paper — marking each for one class of subjects, as trees, flowers and so on through the list. The prints are then attached by the corners to sheets of photo-mounting paper of uniform size, and filed in their respective wrappers. If preferred, mounting can be dispensed with by masking the negatives and printing upon paper of a uniform size.

A similar plan can be adopted by using loose-leaf albums, while still another way is to make prints upon double-weight stock, and keep in vertical filing-cases, like a card-index system.

Whatever method is chosen, any explanatory notes required should be attached to the prints, either by writing on the back or attaching a leaf to the mount.



FROM FIELD AND ORCHARD

WILLIAM S. DAVIS





THE WAYSIDE INN, SUDBURY, MASS.

CHARLES S. OLCOTT

## Stormy-Weather Photography

CHARLES S. OLCOTT



THE three cardinal principles of photography as usually learned by the amateur are:

1. Turn your back to the sun.
2. Press the button.
3. Let somebody else do the rest.

The purpose of this article is to discuss the first point. The second is obviously necessary and therefore good advice, for the "button" or bulb surely must be pressed if there is to be a picture. But a child of four can "press a button," and so start the machinery of some vast industrial enterprise; yet the pressing of the button does not make him a mechanical engineer. And those who go about merely pressing the buttons on their little cameras are not photographers, nor artists, unless they have learned to do a great deal more than this.

As for the third point, any one who follows it steps out of the field of photography the moment he enters it; for if he know nothing of the art of developing and printing, he is not a photographer.

This brings us back to the first proposition, and here, again, the amateur soon finds that he

must "unlearn" the very first thing he has been taught. He discovers that he can take pictures with the sun well around to the right or the left, or even directly in front of him, if it is not too low and he is careful to keep it out of his lens. Eventually he learns that he does not need the sun at all and, if he continues the work long enough, that he can do better with certain subjects on cloudy days, and even defy the winds, the rains and the blizzards.

In a recent visit to the Yosemite National Park, it so happened that heavy rains fell during the first three days of my stay. The great rocks, towering more than three thousand feet above the floor of the valley, carved into wondrous shapes and polished to a marvelous smoothness by the action of glacial ice for countless centuries, were blotted out of existence by a heavy mist, which settled down and spitefully converted the most beautiful scene in America into a dismal failure. The rain came down in torrents and the roads were quagmires of yellow, sticky mud.

There was nothing to do on the morning of the first day but spend the dreary hours in an unat-



tractive hotel, watching the weather hour after hour. At last the reward came. At three o'clock the top of the great Half Dome, rising nearly five thousand feet above the floor of the valley, and said to be the grandest rock in the Yosemite, appeared above the clouds, followed by the North Dome and then the Washington Column. The mist had risen enough to reveal the clear outlines of the Merced River, which made a pleasing foreground to a beautiful picture. I set up my camera just in time to catch an attractive view, which I called "Clearing Weather." The name was all right for the picture, but not for the weather, as I discovered later. Putting on my raincoat, and taking an umbrella to protect the camera, I started out over the soggy path that leads across the meadow, which stretches from the river to the edge of the rocks on the north. I had not gone far, when a light shower be-



MIRROR LAKE

CHARLES S. OLCOTT

gan to fall, and I turned to go back to the hotel. As I did so, I noticed Sentinel Rock, which attains a height of over three thousand feet, and forms a part of the south wall of the valley. Only the upper half was visible, for a great white cloud was floating directly across its face. I soon had my camera in place. The atmosphere above the cloud was quite clear; but where I stood, a steady rain was now falling. Using a long-focus lens ( $11\frac{3}{8}$  inches) to obtain more detail in the rock, and stopping down to F/45, I gave an exposure of four seconds. The result was a picture that was sharp and clear above the cloud, but soft and hazy below.

The following morning was a deceptive one. The early hours gave promise of clearing weather, and I arranged to drive up the valley. Arriving at Mirror Lake, I was pleased to find Mt. Watkins clearly visible, both in the distant eastern sky and in the waters of the quiet pond. The reflections were perfect, every stone and shrub and

tree being duplicated in the mirrored surface. I arranged my camera, setting up the tripod on the nearest available spot; but before taking the picture, I began to walk about — in accordance with my usual practice — to ascertain the most pleasing point of view. My driver said, "You'd better take it now or you won't get it." Taking the hint, I put in a plate-holder and snapped one exposure, "just to make sure." It was the only one I got. The rain had already begun to fall, and my lens recorded clearly the first few drops. Ten seconds later the surface of the pool was so rough

that every trace of its mirror-like quality had disappeared.

We then drove to the Happy Isles, a place where the Merced River laughs and sings as it merrily rolls over the stones down the valley, after tumbling over the Nevada and Vernal Falls. It circles around the wooded isles, bubbling and foaming as if in a delirium of joy at the prospect of reaching the pleasant meadows below.

Here is a problem for the photographer. The dashing foam reflects a brilliant white light, requiring a quick exposure, whereas the wooded island requires a long one if you wish to penetrate its shadows. It was raining steadily when



YOSEMITE FALL  
THE HAPPY ISLES  
CHARLES S. OLCOTT





THE BROOK

CHARLES S. OLCOTT

we arrived; but this fact proved a decided advantage, the darkness of the lowering clouds so reducing the glare of the foaming waters as to make possible an exposure long enough to give detail in the foliage of the islands. On a bright day, with the plate I was using (Cramer Medium Isochromatic) at  $F/16$ , one twenty-fifth of a second would have been about right for the water, but too little for the trees. I gave it one-fifth of a second, which, thanks to the rain, did not over-expose the plate, but did penetrate the woods.

I then walked over a part of the trail that leads to Glacier Point and, after something of a climb, reached the foot of the Vernal Fall. The rain was now falling in torrents; but having come so far, I was determined to have a picture. It was difficult to compose, because the slippery rocks gave little choice of position; and still more difficult to focus, because the rain would persist in getting on the lens, in spite of all efforts to prevent, and it had to be wiped off constantly with a handkerchief. Protecting the camera as best I could with focusing-cloth and umbrella, and giving a last drying to the lens, I quickly pressed the bulb as I raised the umbrella out of the way. The exposure was one-fifth of a second at  $F/8$ , and the result was the picture here reproduced. The exposure of my clothing to the rain was considerably longer, and as I was now thoroughly

drenched, there was nothing to do except return to the hotel for the remainder of the day.

On the third morning, the curtain of mist, which had been obscuring the view from the impatient tourists for two days, gave promise of rising. The river, which flows by the hotel, gradually revealed its shores, then the meadows came into view and, finally, the great wall of rock beyond, from the top of which the Yosemite Creek falls gracefully into the valley in a first plunge of sixteen hundred feet, a series of cataracts of six hundred feet and a lower fall of four hundred, making a total descent of twenty-six hundred feet, or sixteen times as high as Niagara Falls. The lower fall alone, though much narrower, is nearly four times the height of the American Fall at Niagara.

Regretting that I could not then go nearer to the fall, for it was still raining, I determined to bring it to me, and therefore set up the camera on the hotel veranda, and adjusted my telephoto-lens. There was a fortunate clearing of the clouds for a moment and the sun peeped out. With the stop at  $F/16$ , I gave an exposure of six seconds, magnifying the view six times. A little later, with the rain falling again, I used a wide-angle lens from the same point of view, giving an exposure of two seconds at  $F/11$ . It will be interesting to those who do not realize the relative



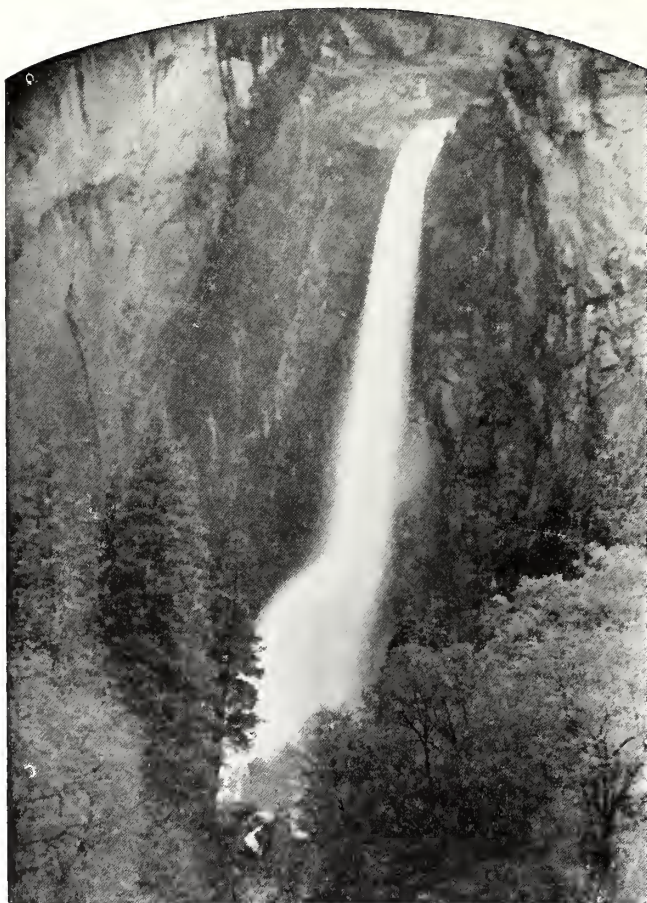


THE VERNAL FALL.



A SHOWER IN THE YOSEMITE.

CHARLES S. OLCOFF



THE LOWER YOSEMITE FALL  
TELE-PHOTO VIEW

CHARLES S. OLCOTT

possibilities of the wide-angle and the telephoto-lens, to compare the lower fall in this picture with the telephoto view taken from the same place without moving the tripod. These views represent two extremes — one drawing a selected detail of the scene toward you, the other pushing it away and spreading out the landscape as far as possible.

These few incidents are here recorded only as suggesting that the photographer need not confine himself to the house on rainy days. Sometimes the darkened sky is even helpful, as I have tried to show. Even in the midst of a snow-storm, the lens will do its work if protected from moisture and given sufficient, but not too much, time. The several pictures of the Wayside Inn, at Sudbury, Mass., here reproduced, were taken in the midst of a snowstorm — so heavy that the objects clearly shown in the picture seemed almost invisible to the eye. They were all taken on very

rapid plates (Cramer Instantaneous Isochromatic), with an exposure of one-fifth of a second at F/16.

The amateur should always bear in mind that it is atmosphere which adds so largely to the artistic value of a picture and to its fidelity to nature. Although there is a vast advantage in sunshine if one is seeking a clear, brilliant picture of a given object, there are many times when the clouds, the mists and the snows can lend a charm which the noonday-sun would only dissipate. For after all, good photography, like good paintings, should portray life as it is, and the great "out-of-doors" has its beauty in times of storm as well as of sunshine.



THE epochs which never violated the laws of decorative convention in art are those which were the grandest.— *Ernest Chesneau*.



# Better Bromides by Redevelopment

DAVID IRELAND

**I**T may be stated as an incontrovertible fact that on bromide paper, prints, whether made direct or by enlargement, may be improved, not only as regards the scale of gradation, but in respect of color. The operation is so simple — carried out, as it is, not in the dark-room, but in full artificial or day light — that it behooves every worker who desires to get the best out of his negatives to give it a trial.

The writer has been interested in this branch of bromide work for a considerable time, and although all the available formulæ were given a trial, regularity of result could not be depended upon. As in the case of the little girl, "When they were good, they were very, very good; but when they were bad, they were horrid." The horridness took the form of pinkish and brown stains extending over the greater part of the surface of fully fifty-percent of the prints, and these stains could not be avoided, in spite of the most scrupulous attention to washing. It appeared, therefore, that the existing formulæ required improving, and a somewhat extended series of experiments enables the following instructions to be given with a feeling of confidence that successful results will be obtained.

Two methods are open, according as a cold engraving-black or a warm-black tone is wanted; for the first of these the following bleaching-solution is prepared:

|                                   |            |
|-----------------------------------|------------|
| Copper sulphate .....             | 240 grains |
| Sodium chloride (cooking-salt) .. | 120 grains |
| Sulphuric acid .....              | 20 minims  |
| Water .....                       | 12 ounces  |

Extreme nicety of weighing is unnecessary, and an avoirdupois half and quarter ounce may conveniently be taken.

The bromide print, made in the usual way, with any developer preferred, fixed, washed and dried, is soaked a few seconds in water, and then flowed with an ounce or so of the bleacher. After the image has been converted to a pale brown, the solution is poured away, and the print washed in running water for five minutes, longer washing being not only unnecessary but injurious. Here let it be said with emphasis that the bleaching-solution, once used, must be discarded; to return it to the stock-bottle, from a mistaken idea of economy, is to solicit trouble for the future.

The print is now ready for redevelopment, and one, and only one, developer may with certainty

of result be employed, namely, acid amidol. The bleacher is acid, and practice has proved that the developer should be acid also. It is prepared at the time of using by dissolving a small teaspoonful of sodium sulphite (the anhydrous form is handy, owing to its ready solubility) in three ounces of water, and adding a small saltspoonful of amidol and about thirty minims of sodium bisulphite lye; this is sufficient for a couple of 12 by 10's. Theoretically, a second fixation should not be necessary, but tests with sulphide have revealed the presence of unconverted silver chloride, even when development appeared complete, and a brief immersion, about a couple of minutes, in the usual hypo-bath should now be given; a sufficient wash completes the operation.

To obtain a warm-black tone, the print is bleached in a solution consisting of a teaspoonful of common salt dissolved in two ounces of water, to which is added one dram of sulphuric acid, and sufficient of a strong solution of potash permanganate to give it a rich crimson color. As bleaching proceeds, the solution loses color, and further small additions of permanganate are made until the image has entirely vanished. If sufficient salt and sulphuric acid are used, there will be no staining, and a wash for a minute or two will leave the print pure white and ready for re-developing.

The same developer, acid amidol, is employed, but development will be rather slow unless the dish is carried out of doors and held under the sky, when it will be complete in about one minute if the daylight is good.

When the nature of the subject calls for a less intense color than black, a rich dark sepia is obtained by the application of ammonium sulphide thirty minims to two ounces water, after the use of this bleacher.

NOTE.—Sodium bisulphite lye consists of —

|                                       |           |
|---------------------------------------|-----------|
| Sodium sulphite (cryst.) .....        | 5 ounces  |
| (or anhydrous, $2\frac{1}{2}$ ounces) |           |
| Sulphuric acid .....                  | 6 drams   |
| Water .....                           | 10 ounces |

The sulphuric acid is poured into the water, the sodium sulphite added and the bottle is shaken until solution is complete.

This lye is a valuable addition to fixing-baths for negatives and bromide prints in the proportion of about three drams per pint of bath. It will be found to be very efficient.

*The Amateur Photographer.*



# Burson Gets Away With It

MICHAEL GROSS



BURSON picked up the morning's paper and glanced through it listlessly. He scanned the lurid headlines on the front sheet, let his eye rest for a moment on the bevy of beautiful stars shown in the "movie" column and then jumped to page three, where a section entitled "With the Amateur Photographer" always appeared. To-day, instead of the usual poor halftone of a worse photograph, the space was filled by a notice telling of a five-dollar prize to be awarded by the paper for the best landscape-photograph received within the next five days. "Looks like easy money," Burson mused, as he carefully read the terms of the contest; "I guess I'll take a shot at that five-spot myself."

Accordingly, bright and early the next morning, Burson loaded up four plates, slung his camera over his shoulder and walked out beyond the city-limits. By ten o'clock he was deep into the woods, gazing eagerly on all sides for the makings of a prize-picture; but it was almost an hour before anything good presented itself. Then, turning a sudden bend in the road, Burson came upon one of those rare canvases that nature alone can paint.

A shimmering pool of water skirted the road. Reflected in its limpid depths was the blue sky overhead, with fleecy clouds that seemed to float along the surface like fairy barges. A giant oak, as if in self-appointed guardianship, cast one of its huge branches directly over the little stream. Wild-flowers grew in riotous splendor at the water's edge, and water-lilies, here and there, dotted the surface. Truly, it seemed like a scene snatched out of fairyland.

Burson, with an exclamation of delight, set up his camera where he stood, focused and exposed a plate. Then he walked to the other side of the stream and took a second picture. Still, the scene held him, and before he could tear himself away, he had taken still another plate — this time showing the reflection of the tree in the water and the wild-flowers along the edge. Remembering that only one unexposed plate was now left, and not knowing what beauties still lay further along the road, Burson folded up his camera and reluctantly left the enchanted little spot.

He trudged along patiently for mile after mile; but it seemed that nature, having now revealed her masterpiece, was presenting her lesser efforts, for all that greeted Burson's eye was either

dense groves of trees or stretches of undulating, low lands. But finally his patience was rewarded. Reaching the end of the road, he discovered that it led, at right angles, into another and wider one, flanked by tall, densely foliated trees. This road ran only a short way and then branched suddenly to the left. As Burson gazed at the scene spread in front of him, the memory of a prize-picture he had come across some time ago sprang into his mind. "Where the Road Turns" had been the title it bore, and the print showed a scene somewhat similar to the one he was now looking at. But how infinitely superior and how much more artistic from every angle was this stretch of road. "Here's a picture that would do that title justice," Burson commented, as he set up his camera, "instead of the hackneyed print I saw. But I've never known it to fail," he added, "the fellow that takes the worst photographs always thinks of the finest titles."

Having focused the scene on the ground-glass, Burson slid in the last plate and prepared to take the picture. He had set the shutter for the twenty-fifth of a second, and was just about to press the bulb, when an automobile, with a young fellow driving and a girl sitting next to him, dashed around the bend of the road and made straight for the camera. Burson, surprised and flustered, let the car get almost on top of him before he made a move. Then, because it was in his hand, and the clenching of his fist was almost spasmodic, he pressed the bulb, setting off the shutter. By this time the man at the wheel had put on the brakes and stopped short within a few feet of the camera. "Oh, I hope we didn't spoil the picture," the girl in the car exclaimed anxiously. "No, no; not at all!" Burson lied nobly — for the girl was bewitchingly beautiful and he could not bear to cause her any distress. "It was already taken before you came around the bend." With a few muttered words of apology, the man at the wheel pulled a lever and the car shot ahead to one side of Burson and disappeared in a cloud of dust up the road. "Well, that one's spoiled," Burson sighed. "It's the last one, too. Guess I'd better go home now."

That night Burson developed the plates. The three pictures taken at the pool, although correctly exposed and technically good, still seemed to lack a certain something — an indefinable charm that the original scene had possessed. Whether it was the fault of the composition or because of the absence of color, Burson could



THE VISION  
T. E. HALLDORSON



SUNSET ON THE BAY

CARL HERMES

not tell; nevertheless, he was a little disappointed at the results. The fourth negative was almost all taken up by the automobile that had so nearly run him down. Of the road, the beauty of which had caused him to set the camera up, not a trace could be seen. What space the automobile did not occupy was filled with blank sky.

When Burson printed the pictures the next night, curiosity to see once more the occupants of the car caused him also to make a print of the automobile-negative. Once printed, it was washed and dried along with the three pictures of the pool. "It'll serve as a good protection to the others when I mail them off," he thought; and, sure enough, on packing up the pictures, a little while later — preparatory to sending them off to the contest-editor — it came in very handy. He laid the three prints face-up, and then laid the picture of the automobile face-down on top of them. To reach the pictures underneath, it would be necessary for any object first to pierce through the top-print — and he knew the editor would understand that he was n't sending a picture of an automobile to be judged in the contest. Burson sent the prints off and then waited, in a fever of impatience, for Saturday to arrive. On that day the prize-winner would be announced, and he could go down and collect the five dollars.

Saturday finally came and Burson hurried to the news-stand. He laid down his cent, grabbed up a paper and turned quickly to page three. The prize-winning photograph had been reproduced, and one glance was enough to show Burson that it was n't any one of the three prints he

had sent in. "Some judges they've got down there," Burson muttered, as he wrathfully flung the paper away and started back; "I guess they left it to a fellow that's been brought up on cheap chromos and buck-eye paintings, who would n't know a good picture if he saw one."

When Burson reached home he found that the postman had just called and left a letter for him. The envelope bore the name of *The Daily News* — the paper that had run the contest — and Burson wonderingly tore it open. A slip of paper fluttered out, and an exclamation of amazement broke from Burson as he noted that it was a cheque for ten dollars. With nervous haste he drew out the letter, which still remained in the envelope. It was from the Motion-Picture Department of *The Daily News* and read as follows:

"We have your photograph, evidently sent to the photographic contest editor by mistake, showing Maud Powell and Ed Norris, the famous movie stars, in Mr. Norris' new car. We have rarely seen a clearer or better picture, and wish to congratulate you on having succeeded in getting these two well-known stars to pose for you. Our staff-photographer has tried, time after time, without any success. Enclosed you will find our cheque for ten dollars in payment for the photograph, and we hope to have the pleasure to see more of your work along this line.

Yours truly,

JAMES C. BAILEY,

Mgr. Motion-Picture Department."

"That's the time I got away with it," Burson gloated. "Who says there's no money in photography?"



# Little Things That Matter

G. U. F. C.

**I**N the many and varied processes of photography a large number of the manipulative operations are standardized, from years of practical experience obtained by the operatives in studio, workshop or factory. One has only to note, for instance, the deftness with which a professional trade-printer will handle and dispose of a bench of printing-frames exposed to a "brisk" light, and then to imagine the manner in which even an advanced amateur would tackle the task, to gather an idea of the enormous advantage that experience and use can give in carrying out what may appear to be a most simple operation. Deftness, dexterity and speed can come only as the direct result of constant personal practice, and cannot be taught; nevertheless, studio- and workshop-methods can be explained and shown to the less experienced, smoothing the path of the beginner, and saving the more advanced amateur much vexation of spirit.

One must not forget that in all photographic operations it is usually the "little things that matter"—quite small and unconsidered trifles, perhaps, when regarded solely as operations in themselves, but often of vital importance when, as they so often do, they constitute links in a chain of operations leading to a successful result.

Of these little things that matter, the correct handling of sensitive plates and papers is typical of many. Finger-marks, the usual trade-mark and literal sign-manual of the beginner and tyro, are seldom the result of accident or inadvertence—their only excuse perhaps—but are caused mostly by incorrect habits of handling. One's fingers, even if quite uncontaminated by any chemical or substance in use at the time, should never be allowed to come in contact with the surface of a sensitive film before exposure, during the progress of any operations, or even when the negatives and prints are finished and dried. The slightly damp exudation that comes from the driest skin, when imprinted upon a sensitive surface, and when that surface is subsequently developed, in the usual manner, will give an image almost equal in density to a fingerprint resulting from the use of printer's ink. The habit of taking hold of all such sensitive materials by their edges, and not by their surfaces, should therefore be acquired as quickly as possible.

The correct and safest manner to use the common or ordinary pressure-frame is one of those little matters that, as a rule, the amateur gives

but scant attention to—most of them using the frames as usually purchased from the manufacturer or dealer. Very few, indeed, go to the trouble to fit the frames with stout front-glasses, or with well-fitting printing-pads. For the credit and reputation of his business, a photographic trade-printer cannot afford to neglect the use of those two precautions; the risk of damage to his customers' negatives, and of turning out indifferent work, would be too great for him to incur. However carefully the frames may be made—and one can rest assured that all due care is taken—slight inequalities develop; even warping takes place along the rabbet of the frame, that sooner or later causes the negatives to crack or fracture under either prolonged or unequal pressure from the springs. Experience soon teaches that, with the usual "cussedness of inanimate things," it is one's favorite negative that suffers. The interposition of a sheet of good glass—a cleaned-off negative will serve, though a stouter glass would be better—between the negative and the rabbet of the frame greatly diminishes the risk of breakage, as very seldom indeed would both front glass and negative be broken at the same time.

The use of printing-pads also reduces the chance of breakage from any possible inequality or warping in the hinged back, and as with their use the pressure from the springs can be slightly relaxed there is another gain there. The safety of the negative, however, is not the chief reason for their use, which is to ensure that proper and intimate contact is kept by the sensitive paper upon the surface of the negative, and to prevent possible displacement of the print when the hinged back is opened for examination during daylight-printing. Suitable pads can be made of single thicknesses of thin soft felt, or of any closely woven cloth, such as fustian, etc., but two or three sheets of chemically pure blotting-paper answer the purpose admirably.

Another simple operation that few amateurs consider necessary, but one that is essential to clean results, is the filtration of the solution in which plates and lantern-slides are fixed. Hypo-sulphite of soda, as sold, is usually quite pure enough for all photographic purposes, but handled in bulk, and stored in cheap wooden casks as this substance is, it frequently collects quantities of grit, small splinters of wood, and other mechanical impurities of all kinds. Such additions are probably unavoidable; but once they get into the fixing-bath they become a source

of considerable trouble, particularly if the atmosphere of the darkroom is at all warm, when the wet gelatine film is exceedingly soft and tender. The floating impurities abrade and scratch the film-surface, and the particles of grit sink and become imbedded in the film itself, causing curious comet-shaped indentations which, when dry, show plainly in any subsequent enlargement of the image.

For trimming, perhaps nothing is better than a strongly made pocket knife with a gently tapered point, and capable of taking and retaining a keen edge, the blade being attached firmly to the handle.

For cutting upon, both zine and cardboard quickly blunt the knife-edge. Glass certainly does so, very quickly if much pressure is put upon the knife; but to obtain a clean, smooth edge to the print, this is not at all necessary. A quickly made slicing cut, with the curved portion of the blade and not with the actual point, gives the best result. Of course, the cutting-shape must be held firmly upon the print, and it is perhaps advisable not to allow any portion of the thumb to project beyond the edge of the glass, as it is not our purpose in this article to proffer hints upon rendering first aid to the injured.—*Amateur Photographer*.

## Work With Half the Lens

JAMES W. F. GREGORY



MOST of us are unfamiliar with the principles upon which a lens forms an image. Having due respect for the optician and for the product of his craft, we hesitate to use the lens in any other way than that formally prescribed by the method in which it has been mounted. It is quite right to do so, as long as our requirements are those that the lens in question has been constructed to meet; but at times we may want something a little different, and it is just as well to know how to get it.

### Including a Wider Angle

To take one case: there is the wish, sometimes, that a lens would include a little wider angle than its maker intended. It is not every one who realizes the extent to which the angle included can be increased by the simple method of racking the lens nearer to the plate. Its first effect is to throw the picture out of focus; but if we use a very small stop, this can be remedied. It will be found, by making a stop of half the diameter of the smallest provided by the maker, which will work out in most cases at about F/90, that a seven-inch focus lens, for instance, can be used as one of nine or of five at will, the angle of view varying accordingly.

The most familiar examples, however, are those cases in which a single combination of a double lens is used in order to get an instrument of altogether different focus. Some lenses are made designedly to be worked in this way. Such are the so-called "convertible" anastigmats, and rapid and wide-angle rectilinears may be so divided and used.

In some cases this method is perfectly possible,

although the optician states that it is not. He means by that that the component lenses used alone will not give sharp pictures; but they can be made to do so by stopping down a good deal. Or, on the other hand, we may not want sharp pictures. The front-combination of a portrait-lens is an instrument which I have never heard recommended for use by itself; but it will yield excellent portraits.

### Using Half the Lens

When the half-lens is made to be used by itself, it is commonly spoken of as being of twice the focus of the complete lens; but this is only an approximation, and often it is not even that. One of the first things to be done by the owner of such a lens, if he does not already know the foci of its two parts, is to ascertain what they are, or at least what proportion they bear to the focus of the complete lens. This latter it is exceedingly easy to do.

With distant objects — and in this connection anything more than a hundred yards or so from the camera may be regarded as distant — their scale on the ground-glass is exactly proportionate to the focus of the lens; so that it is only necessary to focus some distant object first with the complete lens, and then with each of the half lenses, measuring the length of the image in each case, to know the proportions between the foci.

If half the lens gives an image just twice as long as the complete lens, then the half-lens is of double the focus, and so on. But not only will it very often be found that it is far from being so, but the two halves, themselves, are often quite different from each other. Some modern anastigmats are expressly made like this, in order



AN AMERICAN SHIRINE  
CARL H. KATTELMANN





that the user may have a range of foci available; in any case it is advantageous rather than the reverse to find that the two differ.

### How the Stop-Values are Affected

The value of the stops is altered when only half the lens is used, and here again comes in an advantage of making such a test as that described above. The F numbers are increased in exactly the same proportion as the size of the image; so that exposures must be increased in accordance with the altered F numbers.

An example may help to clear up any difficulties. We will suppose that in a distant view, as focused with a complete lens, there are two chimney-pots just two inches apart on the ground-glass. It is convenient to select two objects which are separated by an exact number of inches; there is not usually any difficulty in finding two that will suit. On removing the front half of the lens and refocusing, we find that their images are now just  $3\frac{3}{8}$  inches apart, while, when we remove the back lens and use the front, they are  $3\frac{1}{4}$  inches apart. Then as there are  $\frac{32}{16}$  in two inches,  $\frac{51}{16}$  in  $3\frac{3}{8}$ , and  $\frac{60}{16}$  in  $3\frac{1}{4}$ , we see that the foci are in the proportion of 32, 51 and 60. The front-lens, therefore, is very nearly twice the focus of the combination, but not quite.

To find the actual foci, if we know the focus of the complete lens, will not take a minute. We multiply the focus of the whole lens by fifty-one or by sixty — as the case may be — and divide by thirty-two. So that — if it is a five-inch lens that we are examining — we see that its front-combination is one of approximately nine and a half inches focus, and its back approximately eight inches.

If its largest stop is marked F/8 we find its new F number by multiplying 8 by 51 and by 60, and dividing by 32. We thus learn that the largest stop when used with the back lens only is about F/12 and with the front lens F/15, and must increase the exposures accordingly.

### The Position of the Stop

The position of the stop in a doublet lens is decided by the maker, and it is to be presumed that it is fixed at the point at which the best result — when using the lens as a whole — is obtained. It does not follow that it is in the best position when only half the lens is used. In many cases this does not matter greatly. A very rapid lens of this kind is out of the question, and a little more stopping down is of no particular importance. If this is so, then nothing should be done to alter the position of the stop.

But if — when half the lens is used — we wish to get as good definition as we can, with as large

an aperture, it becomes necessary to have the stop at a greater distance from the lens than it occupies ordinarily. It is never wise to interfere with the construction of a lens; but we may be able to do what is needed without. We may substitute for the tube carrying the iris diaphragm a temporary tube of card with a card-diaphragm on the end of it.

We make the opening in this card-diaphragm of the same size as the largest opening of the iris, but arrange the tube so that the stop is much further from the lens.

### A Good General Rule

A good general rule is to fix it at a distance of one-fifth the focal length, as this is the position which gives the best general result, taking into consideration crispness of definition and flatness of field. The measurement may be made from the center of the curved surface of the glass next the stop. Such an alteration at once increases the size of the field of good definition. On the other hand, it decreases the size of the plate, which is not all covered, though this in the case of the half-lens is generally unimportant.

Single combinations, in almost all cases, have one side convex and the other concave. If a small stop is to be used, it does not matter whether the convex or the concave side is turned towards the object.

### Which Half to Use

If half the doublet is removed, we may use either the front or the back lens in the position in which it is left. But if we examine the effect of turning the lens, it will be found that, when the convex side is turned towards the object, the center of the image will be fairly sharp and the edges very blurred; whereas, when its concave surface is towards the object, the center is no longer so sharp, but the definition generally over the whole of the plate will be better. Stopping down conceals this difference, and so makes it unimportant.

It may be useful to change over the lens for another reason. The back-lens may be of the focus we wish to use, but the camera-extension just a trifle too little to enable us to focus. Then, by screwing the back lens into the place of the front one, we shall get an extension increased by about the length of the lens mount, and it may easily happen that this will make all the difference between being able to use the lens and not.

*Photography.*

PICTURES that repel, rather than attract, cannot be regarded as good art, despite the painful, yet wonderful, realism of Ribera or Ribalta — old Spanish masters. And pictorial photography?

# The Use of Old Plates

R. CHILD BAYLEY

**I**T has been said that plates are made to be used, not kept; and, while such an observation is true enough, the suggestion underlying it — that the subject of keeping plates is of no practical importance to the photographer — is not true. Few of us can foresee our requirements with sufficient accuracy to dispense with any stock of plates at all; nor — as we shall proceed to show — is there any necessity whatever to do so.

Considering their extreme sensitiveness to light, one of the most remarkable facts about gelatino-bromide plates is that they are so hardy in almost all other respects. Their keeping-properties are seldom fully appreciated. We have often used plates which have been stored for a couple of years; we have made first-class negatives on plates which have gone two sea-voyages each of four weeks' duration, at intervals of a year, the plates — at the time of exposure — having left their makers' hands over five years. In these cases, no special precautions whatever were taken; there was no extra packing, hermetic sealing, or tin-lined boxes. The plates were just kept in a drawer, so as to be at hand when required. We mention these, as they are examples within our own knowledge; there are many other instances on record in which these times have been greatly exceeded, and we ask those who read these lines, and have kept plates unaltered for a few years, not to trouble to write and say so, as the fact that they *do* keep is now quite sufficiently established.

It is safe to say that a properly made dryplate does not bear within itself the seed of deterioration. If it is protected from all adverse influences from without, it will remain as good as ever for any time within reason. The agent most likely to be harmful is dampness. Many do not realize how dampness will make its way into closed receptacles and injure their contents. We had occasion, recently, to turn out two or three biscuit-tins which contained lantern-slides, and had been kept in a damp cupboard for a couple of years. In spite of well-fitting lids, the bindings of the slides were mouldy and rotten in many cases, and mildew had actually made its way onto the film of the slides themselves. In such a store-cupboard it would be unreasonable to expect plates to keep without deterioration. But it is easy to avoid dampness, such as this, without taking any very elaborate precautions. A room

that is dry enough to be ordinarily habitable is all that is required.

A more insidious foe than dampness is the product of burning-gas. The sulphur-compounds present in gas-fumes attack the silver bromide very readily; and in most cases in which plates have suffered from being kept, it is to such compounds that we must look for the source of the mischief. One may live long in a room and never know how foul some of the air is in this respect; but, if for any purpose, a step-ladder is mounted, the air near the ceiling is found to be both hot and smelly, if gas has been burning long and there is no ventilator at the extreme top. The moral of all this is, that anything likely to be affected by such fumes should not be kept on a high shelf; it should be so low that if the air were impure it would be noticed at once.

The effect of such fumes upon plates is to cause them to fog in the developer if the effect is only slight; but, if it is an aggravated case, the fog is visible upon the plates before they are developed at all. The action of sulphuretted hydrogen, such as is given off by sodium-sulphide, etc., is very similar; but, being generally much more concentrated, it is more quickly harmful. Sensitive materials, therefore, should always be stored where there is no possibility of it reaching them. As the fumes make their way in from outside, it is the margins of the plates which are first attacked; and one may very often see in such a case, even before development, an irregular band of iridescent metallic-looking fog extending from the edges inwards for perhaps half an inch or more.

In such cases, it does not follow that the whole of the plate is spoiled; one can often use plates that have deteriorated for work where only the middle part of the negative is likely to be required. It may be necessary to add bromide to the developer, say to the extent of a grain of potassium-bromide to each ounce of the solution; but by taking care to give a very full exposure, and not to be misled by the longer time taken for development, this has no inconveniences.

Why should I keep any plates, the reader may ask. There are several reasons. Except for the difficulty of getting plates quickly, there is no reason why one of the less popular sizes should not be used if preferred. A stock of plates can be bought and used as required, being replenished every six or twelve months, as may be necessary.



This has the advantage that all the plates used during a long period are from the same batch of emulsion, and so are uniform in speed- and development-characteristics. Some brands are constant; but there are others which, as our readers know, vary considerably from time to time.

This article may perhaps have another value. Job-lots of unguaranteed plates are often to be bought very cheaply; and it may encourage some to see if they can effect any economy in that direction. For home-use, where, if one plate

turns out to be bad, it is not much trouble to substitute another, such cheap plates can often be used. We know photographers whose enlarged negatives are always made on plates so obtained; and the saving in large sizes is very appreciable, not only because large sizes are expensive at any time, but because, there being little demand for such sizes in odd lots, the reduction is usually in a much greater ratio than with smaller and more popular sizes. For such work, we should not hesitate to buy standard plates.







MT. MITCHELL

S. A. WEAKLEY

## A Camera-Trip to the Blue Ridge Mountains

S. A. WEAKLEY

**L**IKE every camera-enthusiast who longs for the time when he may be able to make that trip of all trips — the one into the Great Rocky Mountains — and, not being different from others who have become camera-enthusiasts, I, too, longed to make that trip. Unfortunately, the distance was too great. As a substitute, I arranged to go into the mountains of our own section. Upon investigation, I decided that no better place could be found than the Mount Mitchell section of western North Carolina, known as the “Land of the Sky,” and, truly, well-named. Mount Mitchell — as you no doubt know — is the center of this section where forty-three peaks tower to a height of over 6,000 feet above sea-level, and it is the highest point (elevation, 6,711 feet) in eastern America. It is situated in the Black Mountains, between the Great Smokys, along the Tennessee-North Carolina border, and the crest of the Blue Ridge farther east. This section is easily reached from all directions by good train service over the Southern Railway, and it possesses the advantage of having many delightful colonies and summer-resorts, which have grown up in the most beautiful spots of the region. The Presbyterian colony is at Montreal, the Methodist at Lake Junaluska, the Baptist at Ridgcrest, the

Y. M. C. A. and Y. W. C. A. at Blue Ridge, and so on, almost without number.

I will give an outline of the trip for those who may wish to visit the Blue Ridge Mountains in quest of beautiful pictures, and will devote the larger part of the description to photography, as the camerist, no doubt, will spend many hours tramping about, camera in hand. My starting-point was at Blue Ridge, North Carolina, and I made all of my side-trips to different points of interest from that place. There are a score of points of interest in the mountains near there to which a party may go by trail and return the same day; but the most interesting trips require two or three days, at least, depending upon a person's physical condition. Some, for instance, make the trip to Mount Mitchell by the Mount Mitchell Narrow Gauge Railway and return in one day. Although the trip made in this way is very beautiful, convenient and comfortable, and it is so made by possibly one hundred to every one who walks, such travelers never see any more of the scenery, compared to that which is to be seen by one on foot, than a person riding in an elevated train from Upper New York down the island and across to Brooklyn. Others take the trails, but walk rapidly all of the way, hardly looking up from the ground or taking a moment to appreciate the scenery along the way.

As this trip to Mount Mitchell is the most beautiful and important of all, I will describe it in detail, for it is the one which should be taken, by all means. The best route to follow is to start from the Black-Mountain station on the Southern Railway, where one can procure enough supplies to last during the trip. It is very important to procure a large, heavy blanket, preferably of the army-type, into which all provisions can be rolled and carried across the shoulders, or, as some prefer, an army-knapsack may be used to carry the provisions. In any event, the blanket must be carried, for the nights are cold even during the hot summer-months, and sleeping must be done either in the open or in "well-ventilated" log-campers' huts, which will be found at the most important places.

My camera-equipment consisted of a  $3\frac{1}{4} \times 5\frac{1}{2}$  Film-Plate Premo with Compound shutter, a  $1\frac{3}{4} \times 2\frac{1}{2}$  Ica film-pack camera, a telescoping-tripod, and, of course, a color-screen and film-packs. A small camera is always a very good addition to one's equipment. On all trips, there are many views of ordinary interest which one may obtain with it, and in addition one may wish to duplicate a picture as a precaution against the possible destruction of the larger negative of the same view.

Personally, I would not advise one to load himself down with a heavy view-camera and accessories. Never exceed seven or eight pounds at the most for photographic materials, for necessary supplies will amount to several pounds, and one *must* eat, in fact, one *will* eat on a trip of this kind. There is one point, however, that I will mention, and that is, the advisability to replace even the post-card camera and tripod—one should always include a substantial tripod—with a camera of the reflecting-type such as the Graflex and the Reflex. The Premo camera and tripod which I carried weighed but a few ounces under four pounds, and several manufacturers of reflecting-cameras can supply equipments almost as light, even the  $3\frac{1}{4} \times 5\frac{1}{2}$  Compact Graflex weighs but  $5\frac{1}{2}$  pounds. With this type of camera no tripod is needed. The advantages of this instrument over the ordinary camera need not be discussed here. Suffice it to say, however, that one great advantage which it possesses, especially on a trip of this kind, is as a time-saver. On my trip, I found that a proper location could hardly be decided upon, tripod set, picture focused, film exposed, etc., in less than ten minutes, whereas with a reflecting-camera it need not exceed half this time. This does not appear so very much of an advantage until one remembers that some days one may be walking thirty miles, and during that time one

may make as many as two dozen exposures. This means a saving of two hours, which can be used to very good advantage to lessen the required walking-speed per mile. It would be well, if possible, to take a reflecting-camera, provided it is of a compact construction.

To return to my starting-point. Upon leaving Black-Mountain station the road leads through Montreal, thence up the trail towards Graybeard, where one meets the narrow-gauge Mount Mitchell Railway, which can be followed the remainder of the trip to Mitchell. There are several mountains along this route which one can ascend, if time permits, such as Pinnacle (elevation, 5,692 feet), and Clingman Peak (elevation, 6,611 feet). The trip can be made in one day and the top of Mitchell reached in time for a cold or a warm supper, depending upon the camp-outfit. Here let me say that one should carry a small frying-pan, coffee-pot and, of course, matches; for a warm meal on those cold nights and mornings is certainly welcome. On the summit of Mitchell is a log-cabin, built for the free use of campers. This affords very comfortable protection against dampness and the whistling winds outside. Wrapped in a blanket and lying upon a thick layer of balsam fir, one can, indeed, be comfortable. The blackish-green fir-trees give the Black Mountains their dark appearance, and consequently their name.

It is well to spend one whole day and, if possible, more on the top of Mitchell, for the mountain itself covers a large area, and there are many beautiful trails which can be explored at leisure. One in particular should be followed, to the small pool of water into which the discoverer, Professor Mitchell, fell from a precipice and was killed.

In the descent from Mitchell, it is best to plan to leave soon after noon by the trail which leads near Rainbow Gap. The night can be spent there and the trip continued the next day along the tops of the Craggy Mountains, where views can be obtained which are claimed by many to excel those from Mitchell. By this plan Blue Ridge can be reached before nightfall, the distance from Mitchell being thirty or thirty-five miles.

There are a few points in particular which I wish to mention, and which will be of advantage to follow should the reader go on a similar trip. By all means carry a developing-tank, trays, etc., so that at least a part of the pictures can be developed and thus check up the correctness of exposure from time to time. One will experience very little inconvenience in developing in one's room (provided one works quietly and cleans up afterwards), for at almost all of the larger resorts, especially at Blue Ridge, one will find running water, electric lights and every convenience, and





IN THE BLUE RIDGE MOUNTAINS  
S. A. WEAKLEY





PANORAMA FROM LEE HALL

S. A. WEAKLEY

as to washing the films — there is an excellent swimming-pool.

Be sure to carry along a piece of water-proof focusing-cloth, to wrap around the camera and accessories as a protection from showers and dampness at night. Another thing — do not be ashamed to carry along a short umbrella, for frequently you will be caught in a very heavy shower, which may last only a few minutes, but, at that, long enough to drench one to the skin. This is most unpleasant, especially if it happens soon before bed-time.

I might add that, next to the camera, in importance, is an exposure-meter. Be sure to get one before you go on a trip, and learn to use it. All pictures accompanying my letter were exposed

by an Imperial Exposure-Meter, and I reduced the time one-half for all open views.

As to the developer; although my plates were developed with the stock pyro tank-powders, I believe that better results can be obtained by giving full meter-exposure and developing with pyro-powders with a reduction in the amount of carbonate.

A Geological-Survey sheet of the Mount Mitchell Quadrangle is a very helpful map to carry along, for many a time it will prove useful in showing trails, roads, points of interest, etc.

My trip was taken in August, which is a very pleasant time to go. June and July are also good summer-months when the resorts are open.

The following table will be of interest:

|                     | Jan. | Feb. | Mar. | April | May | June | July  | Aug. | Sept. | Oct. | Nov.  | Dec. |
|---------------------|------|------|------|-------|-----|------|-------|------|-------|------|-------|------|
| Clear Days .....    | 10   | 10   | 10   | 10    | 11  | 7    | 7     | 6    | 9     | 17   | 15    | 12   |
| Partly Cloudy ..... | 10   | 8    | 9    | 9     | 12  | 15   | 15    | 16   | 14    | 7    | 7     | 7    |
| Cloudy .....        | 11   | 10   | 12   | 11    | 8   | 8    | 9     | 9    | 7     | 7    | 8     | 12   |
| Rainy .....         | 8    | 10   | 13   | 11    | 12  | 15   | 15    | 15   | 10    | 6    | 6     | 10   |
| Rainfall .....      |      |      |      |       |     |      | 4.86* |      |       |      | 1.62* |      |
| Snowfall .....      | 3.6  | 3.7  | 1.0  | 0.3   |     |      |       |      |       | 0.2  | 0.8   | 0.8  |

\*Average greatest and smallest rainfall since 1902.

[The Blue Ridge Mountains may be visited also in the spring-months — March, April and May, i.e. during the dry season — when there is a minimum of rain and a maximum of sunshine. In

fact, some of the places in this region are popular winter-resorts, as in Asheville, N. C., where the temperature has been officially recorded as follows: March, 47°; April, 52°; May, 63°. — EDITOR.]



## EDITORIAL



### The Open Mouth in Portraiture

THE lack of thorough preparation is a well-known characteristic of the average American activity, and nowhere more noticeable than in photographic portraiture. Naturally, amateurs sin more frequently than professionals, and when, with all their inexperience, they engage in portraiture professionally, they are very apt to retain and continue with their faults. It was different in the earlier days, when such masters as Rocher, Sarony, Ryder and Gutekunst were grounded in their art, and carefully avoided the commission of errors in technique and good taste, despite the fact that they worked under comparative difficulties, namely, headrests, low-speed plates and leaky skylights. Nowadays, the operator — this ambiguous designation still survives — who can make the largest number of successful sittings in a day commands a premium. It stands to reason that, in the circumstances, he cannot do justice to his artistic skill. But there is the *élite* photographer who, at prices commensurate with his reputation, is supposed to take the utmost pains with his sittings, and yet he frequently errs in matters of pose — the head will be inclined the wrong way, or the hands appear ill-arranged. In but few profiles that have come to the Editor's notice did the eyes show to advantage, because they were allowed to turn away from rather than toward the camera, and, as a result, the pupil and even the iris (of the visible eye) had disappeared. This oversight has been referred to several times in the Editor's columns, and that would seem to be sufficient.

There is another and, perhaps, more serious fault in photographic portraiture, and one that appears to be on the increase. It is the open mouth — or parted lips, if one prefers — and is noticeable particularly in portraits of young women. The pictorial section of the *New York Sun*, of December 24, contained some striking examples of this form of faulty portraiture. In studying the condition of the mouth, as there portrayed, one cannot fail to notice that the cause is undoubtedly a physical one — some nasal obstruction that impedes the process of normal breathing. The actual cause of the apparent physical difficulty may be adenoids, existing or removed, a catarrhal affection or an

ordinary cold. Or, the fair sitter may belong to the class of persons called "mouth-breathers," who have formed the habit of breathing through the mouth rather than through the nose, simply because it is easier. In some cases the mouth is habitually kept open because of a short upper lip.

Whatever the cause, there is no question that the open mouth in portraiture, as here explained, is a serious blemish, for it cannot be said to improve the artistic quality of the portrait. Besides, the parted lips impart to the face, however comely, an expression of weakness and vacuity, and, in some instances, suggest decidedly unpleasant thoughts. That the sitter does not appear at her best — and she has a right to expect the artist's assistance to this end — must be obvious to every discriminating observer. If it should be the lady's purpose to display or reveal a set of fine teeth, it would be better to adopt a smiling expression, then no ambiguity would exist in the beholder's mind. As to the duty of the artist, after having arranged or suggested the pose, and before opening the shutter, he should request that the parted lips be closed — provided, of course, that such a thing is possible — and be certain that, in complying, the sitter does not assume an expression detrimental to the result desired.

### Effective Leadership

ELSEWHERE in this issue will be found a report somewhat longer than is usually accorded a regular meeting of a camera club. The renewed energy manifested by this particular club demonstrates the value of what in sporting-parlance is known as team-work. It is the same in camera clubs as in churches, lodges and social clubs — no success, no prosperity, unless there is effective leadership, personal interest and general enthusiasm. The California and Detroit Camera Clubs, for instance, are shining examples of successful and influential activity due to thorough organization and united, intelligent effort. With camera clubs being formed and others dying, workers who are interested should emulate the methods of these successful organizations. The interest and support of the community, as well as effective publicity of a desirable sort, are important factors in the success of a camera-club.



## ADVANCED COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.



### Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

### Rules

1. This competition is free and open to any amateur desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff corrugated board, not the flexible kind, or with thin wood-bence.*** Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

### Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

### Awards — Camp-Scenes

Closed November 30, 1916

*First Prize:* None awarded.

*Second Prize:* Bertram F. Hawley.

*Third Prize:* F. W. Kent.

*Honorable Mention:* Otto G. Baumgartener, Franklin I. Jordan, Robert B. M. Taylor, R. A. Worstall.

### Subjects for Competition

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

### Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.

If ambitious to engage in soft-focus photography, first ascertain its character, object and precise application. Remember that its use is founded on intelligence, taste and discrimination, also that it can yield logical and beautiful effects.—W. A. F.





NOON

BERTRAM F. HAWLEY

SECOND PRIZE — CAMP-SCENES

### The Spirit of Winter — Advanced Competition Closes March 31, 1917

THE genuine New Englander has a real sympathy for the people of warmer climes who shiver at the thought of snow and cold weather. He would be as loth to omit the winter-months from his calendar as any of the milder ones, and rejoices in the bracing air, the snow-covered hills and the winter-sports. The long, blue shadows rejoice his heart, and the purple light on the hills in the early twilight is a joy not surpassed by those of warmer seasons. To be sure, there are drawbacks to photography when feet and hands grow numb with the cold, and fingers are clumsy in gloves or mittens; but for one who really delights in the bracing air and the snow-shrouded world there is keen pleasure in the attempt to capture "The Spirit of Winter," and inspire in others his joy therein. Winter is the time for broad effects and simple compositions. The wealth of detail that in summer is often over-insistent and obtrusive is now hidden under the all-obliterating blanket of white, which, according to individual treatment, may be full of unobtrusive detail, or a simple degree of tone.

A good example of the latter treatment is found facing page 25 of PHOTO-ERA for July, 1915. Here the composition is almost entirely in flat tones. The trees on the horizon, and the snow-shoe trail, leading toward them, being the only items showing detail. It is an admirable study in gradation. The opposite method is

illustrated on page 22 of the January issue for the same year. In this the sky and middle distance are almost one flat tone, against which the white mountain hangs like a cloud; but the foreground snow and the frost-laden trees are full of delicate detail.

One secret of obtaining good detail in snow is to point the camera toward the source of light. When this is done, each little irregularity of surface casts its shadow toward the camera, resulting in a pleasing variety of surface. This is well illustrated in the picture on page 191 of April, 1915, PHOTO-ERA. The line of light along the hills in the distance and middle distance, as well as the crispness of the snow in the road, is due to this method of lighting. Another charm of the against-the-light snow-picture is the beauty of the cast shadows. Indeed, it is not infrequently these shadows that constitute the picture. A beautiful example of this is found on page 123 of the March issue in 1916. The sloping side of the knoll, with the long shadows falling across it, is the picture, for the bushes that cast the shadows are indistinct against the hill behind.

Shadows are even more important in winter-pictures than in others, and they are always an important item in the composition. When the background is snow-covered, all shadows take on a luminosity and delicacy impossible to obtain under other conditions, and to obtain in our pictures this luminous quality is to be in a large measure successful in photographing the very "Spirit of Winter."

There are times after a storm which has frozen to the trees when the world seems transfigured to a veri-

table fairyland. Then every little bough and twig is "ridged inch-deep with pearl" and, wherever the eye rests, all is shining whiteness. This state of things is apt to come about in the night and vanish with the sun's return. If the morning is not sunny the snow clings longer; but without the shadows the pictures are less pleasing. So, if the sun shines on such a scene, it behooves the photographer to drop all other concerns and catch his picture before it vanishes. Such a morning is very well depicted in the frontispiece of PHOTO-ERA for January, 1915. Any one whose soul has been thrilled by a sight of the "Spirit of Winter" in such royal canopy as this, will rejoice in the possession of the ability to fix it on paper for the enjoyment of those who have never had the pleasure to live in the realm of the Frost King. Mr. Schulz took no chances with the sunshine, and in his picture on page 188 of PHOTO-ERA for April, 1915, he very cleverly utilizes electric light to produce the desired relief. The result is an admirable picture of a winter's night in which the soft "woolliness" of the light snow is splendidly rendered, and the shadows are amazingly transparent for a night-picture. There is no dead blackness of distance, but detail is suggested throughout, yet without losing the night-effect, a result too seldom obtained. The technical side of snow-photography has its difficulties, as many examples of amateur work show. The snow must look white — yet the tree trunks must not be too black, and many, fleeing from the Scylla of flat grayness fall into the Charybdis of "soot and whitewash."

Nothing is so brilliantly white as a snow-covered landscape in sunlight, and the exposure required is proportionately short. Particularly is this true when the tree-trunks even are covered with snow, and there is not left, "or up or down," one spot of real color to give contrast. Under such conditions an ordinary exposure would result in a flat, unattractive negative, with gray, dirty-looking snow, entirely lacking the snap and sparkle, the purity and whiteness, one wished to capture. There are two ways to improve on this. If the shutter allows of varying the speed of the snapshot, it should be set on  $\frac{1}{50}$  instead of the usual  $\frac{1}{25}$ . If, however, the shutter allows only one speed on instantaneous exposure, the alternative method is to use a smaller stop — probably the medium size when three are provided. Under ordinary conditions, however, there is great contrast in a winter-landscape. The tree trunks and branches stand out black against the snow, and the scene is one of very violent contrasts. The old rule "Expose for the shadows" still holds good, and in such a view sufficient time should be given to give detail in the darker portions if one would avoid a harsh, unpleasant result.

In development the aim should be for a fairly thin negative, not having too great contrast, so that detail in the snow may be printed out without over-printing the darker masses. The choice of a proper printing-medium has much to do with the success of one's endeavors. The winter-landscape can be expressed more adequately in monochrome than can almost any other subject; but the color of the print has much to do with its acceptability as a true representation of the theme. Sepia is not the proper color in which to represent snow-scenes, though one sees it used not infrequently. The shades of black and gray come far nearer to it, and the deep blue of the snow-shadows is rather well rendered by the humble blue-print.

The advantages of using a developing-paper are great, as nearly any quality of negative can be matched with a grade of paper that will give a satisfactory print. It is hardly possible to equal in these papers, however, the softness and beauty of the platinum-print.

Because of the greater simplicity of the material in winter, a good composition is easier to attain and should be carefully considered. One has greater control over the foreground, at least, for in summer it takes weeks of travel to form a faint path through grass ground, but in winter a field of newly fallen snow may be broken up in a few moments by a track leading wherever the artist wishes, and not infrequently a gracefully curving trail is subject-material — adequate in itself to make a picture. In summer, one can do little save select the proper view-point; but with so plastic a medium as snow at one's disposal, there is an opportunity for the exercise of one's "creative instinct." Occasionally one finds his picture made to his hand, but more frequently the composition is improved if the artist does a bit of the making himself. If one has an eye open for possibilities, they may be found, or evolved, on every side, and many, I am sure, will capture the very "Spirit of Winter," and the judges will find it hard to "pick the winner."

KATHERINE BINGHAM.

### A Lens-Test

HAVING, at different times, a good many lenses to examine, I have amused myself by keeping a record of their qualities, and, amongst others, of the spherical aberration they manifested with full aperture. This has been done in the following way, which I describe in the hope that it may be acceptable for "Odds and Ends." The front-surface of the lens is provided with two stops of black paper. One obscures the center, leaving the edges free; the other, like an ordinary stop, obscures the edges but leaves the center clear. They are cut so that in each case the area of the clear aperture is approximately the same. To find out what size circles this requires is easily done. The outside circle is drawn the full size of the glass of the lens. Two radii are drawn at an angle of 45 degrees, and, one being bisected, a perpendicular is dropped from its center to meet the other. The point where this perpendicular cuts the other radius gives the size of the inner circle, which is then drawn through this point, from the common center. This inner circle is the outer boundary of the disc which forms one stop, and the inner boundary of the annulus which forms the other. The test-subject is a flat wall with a small, very distinct pattern of paper on it. Close in front of the dark slide (placeholder) is a thin cardboard shield with an opening half the size of the plate; the shield can be turned so that in one position one half of the plate is exposed, and in the other the other. The test-subject is focused carefully with the full opening, the ring-stop being put close in front of the lens, and an exposure made on one half of the plate. The disc-stop is then substituted for the ring, with a drop of gum to hold it in place, the shield is turned, and a second exposure made on the other half of the plate.

J. W. WHITEHEAD, in *Photography*.

### Copying Same Size

BEING the possessor of a magazine-camera of fixed-focus type, which, according to the editor of *Photography and Focus*, is the least suitable pattern for copying-work, I have adapted it to copy "same size" in a very simple manner. Remembering that, when a double lens of the rectilinear kind is divided and one of its components only is used, the focus of the half lens is twice as long as the focus of the complete lens; and, remembering also that in copying "same size" the extension of the camera is twice what it is when distant objects are in focus, I concluded that by fitting the lens on my camera with another lens of the same focus I should obtain a "doublet" of half the focus of my





"STARTING THE MEAL"

F. W. KENT

THIRD PRIZE — CAMP-SCENES

present lens, and therefore should have an instrument which, without alteration of the distance between the lens and the plate, would give me a sharp image of the "same size." Measuring from the glass of the lens to the front of the plate in the first sheath, I found the separation to be as nearly as possible four and five-eighths inches, and after a little trouble, I obtained from an optician a spectacle lens of this focus. This lens, for which I paid sixpence, I mounted up in a little pill-box-shaped fitting made by rolling a strip of gummed paper around a suitable former. The lens was fitted in it with a couple of strips of eard — one on each side — and all except the glass was then painted a dead black. I find that when the smallest stop is used it copies same size perfectly.

#### A Note on the Direct-Vision Finder

WHEN using the direct-vision view-finder, which is very often found on the modern small camera — writes a contributor in the *Amateur Photographer* — many workers overlook the fact that the finder is often fitted to the side of the camera, and is consequently including, not the exact view of the lens, but a little to one side, or a little higher, as the case may be. When distant objects are being photographed, this is a matter of a very little consequence; but when the subject is within a few feet the composition as seen in the finder, and as it appears in the negative, is widely different, and often quite spoiled through the camera being aimed too high or too much to one side. If the camera, after being focused, is moved, say, half an inch lower, or to one side, as the case may be, the view-finder would not be condemned as inaccurate. The writer recently found this out when using an Ensignette camera with a direct-vision finder, and now negatives with the subject half included, or otherwise spoiled, are never met with. Of course, this procedure is needed only

when the subject is within ten yards or so, and the nearer the subject is, the wider must be the movement in the most extreme case. Half an inch, however, will be found ample for, say, thirty feet. The vertical or horizontal movement, above mentioned, should be merely fractional, say an eighth of an inch, in order that the image in the finder may be the same as that included by the lens of the camera.

#### Blisters in Sepia Toning

WRITES J. W. Sugden, in *Photography*: I was troubled with blisters appearing on prints when toning them by the sulphide method until I found that one or two drops of acetic acid in the sulphide bath formed a complete preventive. It seems to prevent the gelatine from softening better than anything I know, while it does not affect the permanence in any way. I have prints done eight years ago in this way, and there are still no signs of fading.

#### Removing Films from Spoiled Plates

It is often required to remove films from spoiled plates for printing from roll-film negatives, for trimming prints, cover-glasses for slides, passepartout and other purposes when it is necessary that the glass should be quite free from scratches. It will be found that if the spoiled negative is taken from the fixing-bath, and put straight aside to dry without any washing, when dry the film may be easily stripped from the glass by one corner. Old negatives may be given a hypo-bath, and treated in this way with the same result. The above, though simple, is quite effective, and is one of the easiest ways to do this job, and, certainly, has economy in the materials required to commend it.

*The Amateur Photographer.*





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
With Reviews of Foreign Magazines, Progress and Investigation  
Edited by A. H. BEARDSLEY



## Change of Stop-Number for Near Objects

A CORRESPONDENT in the *Amateur Photographer* offers valuable information in regard to the use of stops for near objects. Every one, nowadays, knows that when copying same size, or life size, the lens-to-plate distance is double the focal length of the lens. That is to say, a five-inch lens would then be ten inches from the image and also ten inches from the object. Hence the stop-numbers as marked are to be read as double, i.e., stop marked F/8 is to be reckoned as F/16. But suppose we are working to some other scale — e.g., flower-subjects one-third life size — what about stop-numbers then? When dealing with a distant object the plate-to-lens distance is (practically) the focal length. But if the object is near enough to be only three times the image size, then the lens-to-plate distance, or “working distance,” is  $1\frac{1}{3}$  times the focal length. Thus, with a six-inch lens it would be eight inches. Now if we use any stop first at 6 and then at 8 inches working-distance, the stop-number will change in the ratio of 6 to 8, or become 8-6ths of what it was; so F/6 becomes F/8, and F/8 becomes 10.4 and so on. Or neglecting stop-numbers and only regarding exposures, the *relative equivalent times* at six and eight inches working-distance with the same actual stop are as 6 x 6 to 8 x 8, i.e., 36 to 64, or say 4 to 7 roughly.

## A Note for Film-Users

AN extremely helpful suggestion to roll-film users is given by a writer in the *Amateur Photographer*. One of the drawbacks that the worker who uses roll-film almost exclusively is often aware of is that, when only one or two exposures are made, he has to wait until the rest of the spool is exposed before developing, or waste the film. The present writer uses roll-film most extensively, and overcomes this difficulty very simply as follows: A spool of the required size is taken into the dark-room, and the black paper unwound until the film is reached; then, noting the white line on the black paper denoting the end of the first exposure, this is cut through, giving us enough film for a single exposure. It is best not to cut through the black paper, as the film may then be carefully rolled up again until required for further use in the same way. The piece of film may then be laid across the back of the camera in the proper position, and a piece of black paper laid over it to keep out all back light, and the back of the camera put on. This is now ready for the exposure. The above is of especial value at this time of year, when fewer exposures are made than in summer, and the plan is also of value for evening negative-making, when only one or two exposures are required at a time. Developing, of course, is done in a dish in the usual manner.

## Washing-Soda

AMONG the minor economies that photographers can practise is the use of washing-soda in place of the sodium carbonate crystals obtained from the chemist. The two are identical chemically, the latter being a purer form of the same substance. If best quality soda is used, and the cleanest humps are picked out, it may be employed with safety in any photographic solution.

Instead of picking out the crystals by hand, a better, if somewhat more troublesome, means to ensure a sufficient degree of purity is to recrystallize the soda. To do this, dissolve as much soda in boiling water as the latter will take up. Filter the hot solution through blotting-paper folded into a cone, and supported in a funnel which, in the absence of a proper hot-filtering apparatus, should be kept hot by pouring boiling water around the outside. If the stem of the funnel is passed through a cork closing a wide-mouthed bottle, the hot filtered solution can be collected in the bottle, and, upon cooling slowly, will deposit crystals of sodium carbonate. It is necessary to provide an outlet for the air without allowing the water from the outside of the funnel to find entrance. A glass tube passed through the cork and bent at right angles answers the purpose capitally.—*Amateur Photographer*.

## A Clearing-Bath for Stained Bromide Prints

A SIMPLE but efficient “clearing” bath, which is particularly suitable for removing yellow stains from bromide and gaslight prints, can be made up as follows:

|                               |                      |
|-------------------------------|----------------------|
| Saturated solution alum ..... | 5 ounces             |
| Hydrochloric acid .....       | $1\frac{1}{2}$ drams |

After the print has been thoroughly washed, to eliminate all traces of hypo, it is immersed in the above acid-alum solution until the discoloration has disappeared; it should then be withdrawn immediately, and subjected to a good final washing in running water before being put upon one side to dry in the usual way.

*Amateur Photographer*.

## A Word for the Tripod

THE increased use of hand-cameras has led many amateur and professional photographers to avoid the tripod in their picture-making. Of course, the trouble of carrying the tripod is a drawback, and it is the principal reason for its seeming unpopularity. Even the compact- or aluminum- tripods appear to be in disfavor. The fact remains, nevertheless, that a tripod is a necessity whenever the careful worker wishes to do justice to his ability and to the scene he wishes to perpetuate. Most amateur and professional photographers are trying continually to obtain more efficient outfits with which to make better pictures. However, no matter how fine the lens and the camera may be, if the equipment is not properly supported, so that it will not tremble in the wind, or be affected by the tremor of the human body, one's best efforts will be often in vain. The fine corrections of the modern anastigmat lens require accurate alignment and the stability of the camera to obtain the best results in landscape, architectural, commercial and scientific picture-making. The tripod is not a very profound technical subject, to be sure; but photographers should not lose sight of the fact that keen technical knowledge without attention to every detail — however seemingly unimportant — is of no practical value. Sella — the famous Alpine photographer — never considered the tripod a burden. It sometimes required six guides to carry his photographic equipment up difficult peaks.



# BEGINNERS' COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what contest it is intended.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed November 30, 1916

*First Prize:* Arthur E. Anderson.

*Second Prize:* Fred'k C. Buchholtz.

*Third Prize:* W. K. Waters.

*Honorable Mention:* W. G. Adams, C. K. Baker, Ross W. Baker, Wm. Baxter, E. J. Brown, J. Louis Cunningham, LaRoy Currier, R. W. Dawson, George W. French, W. H. Hall, Mrs. Howard O. Hope, Warren R. Laity, Irving S. Lovegrove, Louis R. Murray, Henry L. Osborne, Geo. P. Russell, Kenneth D. Smith, M. C. Still, Fred'k Wainwright, Elizabeth Wotkins, Alvin Stallman.

Special commendation is due the following workers for meritorious prints: Halvor A. Caum, A. S. Lipton, C. A. Pierce, Karl Tausig.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Competition for advanced workers.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.



BOOKS are the records of man's accomplishments. They are the means by which each generation acquires the experience and inspirations of the generations that have passed, and lifts itself to a higher level. An appetite for good books is as necessary to the growth of mentality as is an appetite for good food to the growth of the body.— *Glen Buck.*



## Concerning Equipment

It is not unlikely that, as the summer-months draw near, many amateurs, dissatisfied with their snapshot-equipment, are casting about for a more business-like implement, and a few suggestions as to cameras, lenses, etc., may not be amiss.

The size of one's camera, perhaps, is the first thing to consider, and that is a matter where very little help can be given, as each one knows best his own requirements. A word about shape, however, may be suggestive. The long, narrow shapes are preferable to the squarer sizes, such as  $3\frac{1}{2} \times 3\frac{1}{2}$  and  $4 \times 5$ . The 3A Kodak,  $3\frac{1}{4} \times 5\frac{1}{2}$ , which is approximately postcard-size, is a fine camera for small work. It is not so large as to be burdensome, yet the pictures are of sufficient size to be worth while.

If one is ambitious to make real pictures, however, one will want to procure with this camera a plate-adaptor, which will make it possible to compare the picture on the ground-glass. A tripod will also be needed if serious work is to be done. This equipment, with a good lens, should enable one to obtain pictures worth the making, and it has the advantage of portability when one wishes to use films on trips when plates would be less desirable, on account of weight and bulk. Where one can have but one camera, this is a great recommendation.

If a larger picture is desired, the "view" type of instrument is to be recommended. It is light and has no leather covering to wear shabby. It consists of a bellows of a good extension, between two frame uprights, one supporting the lens, and one the focusing-screen. These cameras must, of necessity, be used on a tripod, and a firm, rigid one is greatly to be desired. It is worth any difference in price to have one that will not wobble and vibrate in the wind. As a matter of fact, however, I believe that stiff wooden-tripods, adequate to the task, may be obtained for a less expenditure than the telescoping metal variety that may answer for a light hand-camera, but are unequal to the weight of a larger instrument. The  $5 \times 7$  view camera is an attractive size and shape, and is a convenient size to use.

The essential feature of any camera is the lens which it carries, and into that one can put all the time, thought and money one wishes. If only one lens is to be used for all purposes, one of the convertible-anastigmats of the class of the VII A Protar is adaptable to more uses than most lenses. This type of lens consists of two separate lenses fitted into a lens-tube or shutter. Either one of these lenses may be used singly or the two may be used together. The two single lenses are of unequal focal length, and the doublet gives still another, so that one has a choice of three sizes of image from the same view-point. The longer the focal length of a lens (the difference between lens and plate when focused on infinity, 100 feet or over), the narrower the angle, that is, the less will be included in the picture, but the larger the size of the objects included. This choice of size is extremely convenient many times. It may be that a view of a certain building can best be obtained from a particular spot some distance away. With the full lens the image from that distance is too small, so the front lens is unscrewed from the shutter and the bellows pulled out until a focus is reached. Perhaps the house is still too small and we put back the lens removed and take out the other. The bellows must be extended still more, and when a focus is found we discover that the plate is nicely filled and the house is of adequate size. It is necessary with this lens to have a camera with a long bellows, otherwise advantage cannot be taken of its possibilities. A short bellows does not allow sufficient distance between lens and

plate to obtain a focus with a narrow-angle or long-focus lens.

A good, reliable shutter is also a necessity. One having speeds of  $\frac{1}{2}$ ,  $\frac{1}{5}$ ,  $\frac{1}{10}$  and  $\frac{1}{25}$  up to  $\frac{1}{100}$ , and having an iris diaphragm, is a desirable one to purchase. The  $\frac{1}{10}$  speed is often invaluable, and most varieties of shutter now have it.

If one has been accustomed to a hand-camera with films and a view-finder, one will find a bewildering number of things to learn before one can successfully operate the new equipment. It will be wise to spend plenty of time getting acquainted with its intricacies, observing its various operations and making sure that the manipulation of the different adjustments is thoroughly understood. It might be well, at first, to make a list of the things to be done, and look it over each time in order to be sure all is right. After a little this procedure will be unnecessary. After selecting a desirable view-point, the camera should be set up and, the shutter being set on time, the lens opened. With the focusing-cloth covering the back of the camera and shutting out light from behind, observe the image on the ground-glass while turning the lens-board forward and back until an approximate focus is reached. If the image is too large, set up the camera farther away; if too small, move nearer and readjust the focus. When the desired size and arrangement have been obtained, focus sharply on some object a little beyond the immediate foreground, then slowly stop down the lens (always focus with full aperture!) by sliding the indicator along until sufficient detail is secured in both foreground and distance. This done, close the shutter and, having calculated your exposure at the stop determined upon according to some reliable exposure-guide like that published in PHOTO-ERA, set the required speed on the indicating-scale at the top of the shutter. Now insert the plate-holder, set the shutter, pull the slide and press the bulb. It is not as complicated as it sounds, and the joy of the improved results is well worth the effort.

KATHERINE BINGHAM.

## Why Do My Prints Fade?

It is a sad disappointment and discouragement to discover that prints of last year's vintage, that when made were rich and brilliant in color, have now fallen off from this erstwhile beauty and show a pale and anemic countenance of jaundiced hue to our disapproving gaze. It would be a solace if we could lay this defection at the door of the manufacturer; but alas! we have only ourselves to blame if our prints lack permanence, and it behooves us to look well to our ways and do all in our power to correct our errors.

"Ninety-nine times out of a hundred" the trouble is with the fixing or washing. It is exceedingly poor economy to over-work the fixing-bath or skimp its bulk, for upon proper fixation depends the future of the print. A good depth of solution in the tray is essential, so that prints do not lie together when first immersed in the bath, and a bath should not be used after it gets frothy or feels slippery to the touch. Prints should be well separated and moved about during fixing, that the solution may have free access to all parts of the surface. Though fixing should not be cut short, neither should prints be allowed to lie too long in the bath, or ugly brown stains may appear, due to the heating and sulphurization of the acid hypo solution.

A good way to manage when a large number of prints are to be made is this: When 25 or so prints have been made and fixed face up as usual, turn them face down, and when 25 more have been made and put in the tray





A LONG CAST

ARTHUR E. ANDERSON

FIRST PRIZE — BEGINNERS' CONTEST

face up, remove the first 25 and place them in the washing-tray.

There are many patent-washing devices on the market almost any of which is good. The ideal adjustment is a circular receptacle with the outlet at the bottom, because the chemicals sink to the bottom as they leave the prints. The inlet should be at such an angle as to keep the prints in vigorous motion, but not with sufficient force to tear them or abrade the surface. It is quite possible, however, to free prints from hypo without such a device. A large tray into which the water from the tap may be run by means of a piece of rubber-hose answers the purpose very nicely. The water should strike one side of the tray with considerable force, so that the prints move gently one over another. If the bottom prints are placed on top occasionally, and the tray emptied once or twice, the time of washing is shortened somewhat, but no harm is done by allowing full time, and much harm may be avoided. If sufficient attention is paid to fixing and washing, there should be no occasion for deterioration in a black and white print.

KATHERINE BINGHAM.

### Cleaning Color Off Prints

A CORRESPONDENT recently got into trouble through being unable to clean a platinum print from the color he had put on for temporary blocking-out purposes. Platinum prints are somewhat exceptional in this respect, as the paper used is very absorbent; but on all ordinary-sized paper watercolors are removed quite

readily with the aid of soap. With patience, the same remedy will act with papers that are only slightly sized. The color used, however, must be ordinary watercolor, and it is necessary to avoid special color-preparations that have been treated to render them waterproof. Even India-ink, if pure, will yield to soap, though it will resist plain water. The method is to take a fairly large stiff sable-brush, dip it in water, and then with it work up a good lather on a piece of plain yellow soap. The print or drawing, having been previously washed free from all color capable of being removed by plain water, is then treated with the lathery brush, alternate washings and soap applications being repeated until all the color is removed. The method sounds obvious; but, curiously enough, we have met many draughtsmen who had no idea that soap was a safe remover of pigment from paper, and, quite possibly, the method will be equally new to many photographers.

*British Journal of Photography.*

### Spoiling the Pleasant Expression

"WHAT did you say your age was?" remarked the inquisitive and tactless photographer, as he asked the youthfully attired sitter to look at the grease-spot on the wall.

"Well; I didn't say," smartly returned the girl, "but I have just reached twenty-one."

"Is that so?" he replied consolingly, as he drew the slide. "What detained you?"



## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**C. E. S.—To make enlargements of uniform size** the Eastman enlarging-camera is the simplest and least expensive apparatus for your purpose. It may be had in several sizes, to take negatives from  $1\frac{1}{2} \times 2\frac{1}{2}$  up to  $4 \times 5$  and postcard sizes, and to make enlargements from postcard size up to  $8 \times 10$ . It is easy to operate and gives very good results.

**E. T. F.—Irregular transparent spots in plates** are usually caused by dust on the film. It is a good plan to give one's camera a "house-cleaning" occasionally. When a film is removed after exposure, do not put in the new one until you have dusted the inside of the camera thoroughly. Take off the back and extend the bellows to its full length. If the lens is easily detachable, remove that also; then, with a slightly dampened cloth, wipe the inside of the bellows, the removed back, the lens-board and the whole instrument. Wipe the lens carefully with an old piece of linen and re-assemble the parts. If plates are used, they should be dusted before loading, and the plate-holders kept free of dust. The spots can be filled in with a fine brush and watercolor. If they print white, they must be treated again on the print.

**D. N. P.—The designations of the grades of Azo paper** are rather misleading. The grade you are using, although marked Hard, is, in fact, a rather soft-working paper. A better grade for your use would evidently be Hard Medium. This should give you very good contrast for ordinary use, whereas the Hard X is capable to produce very creditable prints from negatives that are exceedingly flat.

**A. F. P.—The dirty appearance of glossy prints** is due to abrasion, and can be avoided largely by the use of Non-Abrasion developer. It may be removed, however, when it occurs, by rubbing the prints with a tuft of cotton moistened in alcohol.

**B. C. P.—Using a color-screen without color-sensitive plates** is of little advantage. An orthochromatic-plate and color-screen together will help greatly to give true rendering of clouds or of many-colored flowers, of distant mountains, or of objects representing fine gradations of color; but either one without the other is handicapped, though color-sensitive plates alone are capable of better differentiation than are ordinary plates even with the ray-screen.

**A. B. Y.—A lens works at full aperture when no stop or diaphragm is employed.** Generally speaking, a lens is said to work at "full aperture" when the maximum diaphragm marked on barrel or shutter is used.

**O. C. H.—Buying used cameras or lenses** is very satisfactory providing you purchase standard goods from a reputable dealer. It is the general custom in all transactions to allow the customer the privilege of a ten-day trial or inspection of either a camera or a lens. In most cases money is promptly refunded if goods, for any reason, are unsatisfactory.

**C. G. S.—The life of a fixing-bath** cannot be determined definitely without much experiment by the individual. It is advisable to note carefully the

number of prints which your fixing-bath will take without weakening enough to cause trouble. When the exact number of prints has been found by several tests, you will have arrived at a sufficiently accurate working-knowledge to meet your own requirements. Of course, your information cannot always be applied to the requirements of others without a test; though baths of the same strength, and intended to fix the same number and size of prints, will virtually work the same in most cases.

**W. J. K.—The use of the ground-glass** is recommended whenever the photographer wishes to know exactly the size of image he will obtain upon the plate. True, many beautiful and highly satisfactory pictures are obtained by the use of a focusing-scale; but much depends upon the photographer's skill and his ability to estimate distances correctly. Focusing by the ground-glass is too bothersome for many; nevertheless, the photographer who seeks to compose his pictures with regard to correct technique, will find the use of the ground-glass—in view- or reflecting-camera—eminently the most satisfactory method to obtain results.

**C. K. A.—For serious photography miniature hand-cameras are highly satisfactory.** To-day the market affords many models of well-built and well-equipped miniature cameras. It is possible to obtain these excellent little instruments with high-grade lenses and shutters. In fact, virtually the same lens- and shutter-equipments may now be had with miniature cameras as were formerly sold only on the larger outfits. The advanced worker may now obtain in miniature form a duplicate of his high-grade and high-priced equipment. Some photographers use the miniature camera to the exclusion of any other and produce results that are highly commended by competent judges.

**B. H. Y.—To develop plates or films by the tank-method** is now no longer considered an untried experiment. Without a doubt, tank-development is the best and most satisfactory one for amateur and many professional photographers. So thoroughly has this method of developing been tested that in exceptional cases only is the tray- and darkroom-method considered superior. The developing of autochrome and Paget plates, used in color-photography, is done best in the darkroom, as these plates require special treatment and cannot be classed with ordinary plates and films.

**F. E. C.—Great shutter-speed is not required in snapshot picture-making.** Most shutters having speeds of  $\frac{1}{25}$ ,  $\frac{1}{30}$  and  $\frac{1}{100}$  second will answer admirably. It is of advantage, however, to have a shutter which gives speeds of  $1$ ,  $\frac{1}{2}$ ,  $\frac{1}{5}$ ,  $\frac{1}{10}$ ,  $\frac{1}{25}$ ,  $\frac{1}{30}$ ,  $\frac{1}{100}$  and  $\frac{1}{200}$  second, especially in connection with an anastigmat lens. The focal-plane shutter, though very efficient for slow and high-speed exposures, is not essential to ordinary snapshot-photography. Before deciding upon a shutter, it is best to consider carefully the sort of pictures one expects to take and then purchase a shutter suited to the work in hand. In no circumstances use oil or vaseline in an attempt to make a shutter-valve work easily, as lubricant of any kind will cause the valve to collect dust and become much gummed-up. The best way is to have the inside and outside of the piston buffed by a reliable repair-man.

**A. H.—The difference between an imported lens and a native one**—both lenses being of the same mathematical formula—is virtually only theoretical. Even though a purchaser thought that, in the matter of workmanship, there was a slight difference in the two lenses, it would be very hard to discover any difference in the results.





THE MOWER

FREDERICK C. BUCHHOLTZ

SECOND PRIZE — BEGINNERS' CONTEST

### Management of Flashlight

IN making pictures by flashlight, particularly portraits, it is necessary to make use of a diffusing-device in order to get the best results. Most failures here are due to underexposure, causing strong highlights and shadows, with lack of detail in both. Let the worker look at his reflection in a tall looking-glass, in a well-lighted room (electric light) and with a strong beam of electric light suddenly thrown upon him. Note the sudden disappearance of the diffused lighting on the face—replaced by almost ghastly contrast. At best, flashlight is a substitute for daylight, but, managed skilfully—by depriving it of its characteristic faults—it approximates daylight. Indeed, portraits and interiors are now produced by flashlight exactly as good as if made by diffused daylight. It is the clever employment of a sheet or screen of cheese-cloth or muslin that will produce soft and harmonized lightings. Admirable flashlight-portraits appear in PHOTO-ERA from time to time and are worth careful study.

### Printing From a Cracked Negative

A CRACK in the glass of a negative usually leaves a very broad and conspicuous mark on the print because the edges of the crack cast a shadow. The best thing to do when a negative is cracked is to transfer the film to a fresh sheet of glass. However, this procedure requires great skill, and should be attempted only as a last resort. It is better, if possible, to use methods which will not endanger the negative. One of these is to join the surfaces of the crack with Canada balsam. Another method that may be used—in cases where the crack is not too large—is to make a new negative. To do this, make an enlargement from the negative with an enlarger provided with a condensor. The resulting print will show the crack as a white streak. This can be eliminated by the careful manipulation of a retouching pencil. Then photograph the enlargement down to the original size of the broken negative. A print made from this new negative should show no sign whatever of the crack.





## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

H. L. O.—“The Mill-Stream” shows much artistic taste in composition, although it is a trifle too symmetrical; i. e., each side of the dam is flanked by a group of rocks and trees. It would seem that if the picture had been taken somewhat diagonally, it might have produced a more pictorial result. The technique is virtually perfect—too much so, indeed, to allow the imagination any freedom. The definition is too sharp, and this extreme realism is something to be avoided in these days of advanced pictorial photography. Try a print obtained with the assistance of one or two sheets of transparent celluloid placed between the negative and printing-paper.

H. A. C.—“The House on the Creek” forms a very attractive theme, with a white house at the left and rich foliage all about. The picture is virtually bisected horizontally, forming the object above, and its reflection in the water below. Ordinarily, the eye is attracted by a scene of this sort; but when it is converted into a camera-picture, much artistic judgment is required to make the result one of enduring pleasure and satisfaction. We should advise that you try another picture of this attractive spot, but from a different viewpoint. It seems technically defective, for the light comes from above and in front, and this front-lighting, without shadows, produces a flat and monotonous effect. A large, white object with its reflection does not usually constitute a happy pictorial theme. Your treatment of the subject, however, shows promise, although the effort is worthy of a better cause.

L. R. C.—Your view of the country-road with the country church at the end of it forms an attractive subject. It would have been better if the definition were not quite so clear throughout. The interest of the road

is lessened considerably by the charming vista of a hill seen through the trees which line the road at the left; but you must learn to choose a subject in which the interest is not scattered as in this instance. The beginner is very prone to include all that the camera-eye can see. It is a generous attitude to assume, but it is not conducive to good art in photography. Simplicity in design is a rule to be followed in pictorial work.

A. S.—Your “River-Scene” is weakened pictorially by being virtually bisected horizontally. The water occupying the foreground is exceedingly interesting, and, as the sky is what is termed bald-headed, you could well afford to cut off a large portion of it and thus emphasize the pictorial interest. Some workers tint the sky by exposing the print—the rest of the picture being masked—and in this way overcome the objectionable whiteness of the sky. Your artistic intentions are very evident in this picture.

A. S. U.—There is a beautiful quality in your print, “Autumn-Reflections,” showing a broad path in the woods and a pool of water in the foreground, in which trees and sky are reflected. Unfortunately, your picture-design is a dual one; for by omitting the pool with its reflections, you will have a very pleasing wood-scene with the sky seen faintly through the trees. Or if you choose, you can eliminate the upper part of the picture and have a somewhat unique effect, produced by the foreground including the water with reflections, although the imagination would have to supply the objects causing the reflections. By all means, sacrifice the foreground and be satisfied with the complete picture supplied by the upper portion within your picture-area. But the theme and technique are highly commendable.

H. L. O.—The pond you have portrayed shows an appreciation of artistic proportions. Better if you had

waited to include some clouds in the sky which, possibly reflected in the water, would have imparted a greater artistic value to your picture, which is technically satisfactory.

E. W. W.—Your street-view is taken too directly with the light to be pictorial. Notice that the trunks of the trees are not round but flat; no shadows are visible, they are directly behind the objects that cast them. At some other time of day, when the shadows fell obliquely, the trees would model properly, and much better results would be obtained.



THE THREE BROTHERS

W. K. WATERS

THIRD PRIZE — BEGINNERS' CONTEST

E. S. B.—Your sunset picture is very attractive, but it is greatly marred by the heavy mass of unsupported branches at the right. Had the camera been turned a trifle more in that direction, so as to include the tree-trunk, this would have been an exceedingly fine thing.

E. P.—The only criticism of this well-composed landscape is the lack of definition in the foreground. The distance is more sharply focused than the nearer bushes and ferns, a reversal of the proper order. In Nature the distance is more or less softened by the intervening atmosphere, and to render it more clearly than the nearby objects is to break all laws of "aërial perspective."

M. S.—A fine composition and arrangement, but either your plate is much overdeveloped or you have used a paper of too great contrast. As it is, one almost thinks at first glance that the meadow is covered with snow. A subject so strong in contrast as this, of trees in shadow cutting against a distance in full sunlight, needs plenty of exposure and careful development. It may be that a soft-working paper might give you better results from this plate.

E. E.—This print is very much improved by trimming two inches from the foreground and one and one half more from the sky. This leaves a long, narrow panel with very good lines, and you lose nothing but uninteresting sand and cloudless sky.

K. D. S.—Your picture of a butterfly resting on a field-flower does not appear to have much pictorial or technical value, because of the spottiness not only of the butterfly's wings, but of the blossoms of the flowers. Pictures of this kind can be made with great artistic success, as you may remember to have seen in the pages of PHOTO-ERA. One, published by W. S. Davis, several months ago, was an admirable example. There is something radically wrong when apologies have to be made for the careless and displeasing appearance of a hastily made photograph. The only praise, merited by your effort, is the good intention, and we are sorry that the element of haste and ill-success has been expressed in so obvious a manner. Patience and deliberation in pictures of this kind will reap their own reward.

K. D. S.—Your winter-scene, "The Ski-Runner," in the woods is but a fragment of a much larger picture. Though the tree-trunks are not too dark and the shadows on the snow add interest to the foreground, the figure of the man occupies the center of the picture-area. There is no main interest anywhere to be seen. Furthermore, the picture is bisected horizontally. The scene is pictorially attractive and the technique admirable; but from the view-point the woods have been photographed, there appears to be little opportunity to concentrate the interest in any part of this really interesting scene. The skis, supposed to be attached to the man's feet, are not in evidence.

R. W. D.—Your picture, "State Fish-Hatchery," is good, technically, and to compensate the absence of clouds in the sky, you have included branches of the tree beneath which you were standing. The trees at the right are, too, a prominently dark mass, and the road which goes along the right of the picture is far more attractive than the building—the main object in your picture, which thus has a dual interest. We should prefer the building without any diverting interest; or the attractive road-view without the intruding building (the fish-hatchery).

H. O. K.—The baby appears to be too crowded in the picture-space; it also appears a trifle underexposed, unless, indeed, the complexion and the skin are really as dark as depicted. The background is not particularly artistic nor sufficiently removed from the subject—being, apparently, in the same plane. The picture

does not evince careful preparation towards the best results intended.

H. O. K.—The girl with the broom is posing, and apparently not in an attitude to suggest being actually at work. The figure, particularly the head, is not distinct, and shows motion. In neither picture do we discover any particular artistic merit. They appear to be little more than mere records.

### Japanese Photo-Pictorialists

WE recently received from Osaka, Japan, a collection of prints by the members of Tenkyukwai, a club of native amateurs, indicating a high standard of pictorial photography. Sixteen photographs,  $6\frac{1}{2} \times 8\frac{1}{2}$ , printed in sepia, brown, warm-black and blue-black tones, and attached to plain 11 x 14 mounts, are encased in a home-made folio covered with coarse, natural-colored linen, neatly held together by means of small bone-bobbins. On the inside cover are printed, in Japanese and English letters, the names of the artists, each contributing two prints. There is also a large, neatly typewritten sheet of heavy, rough, white paper, giving the history and object of the club, in the most modest of terms, one side in Japanese and the other in English. The subjects pictured are landscapes, street-scenes and marines, with one portrait, in the interpretation of which the artists display genuine artistic feeling, rare appreciation of natural beauty, a thorough understanding of the accepted rules of art and a masterly control of the technical resources of photography.

The subjects that make the strongest appeal by reason of pictorial merit and breadth of treatment are: No. 8, a group of poplars relieved against a clouded sky, a low, tile-roofed building at the right—a composition of wondrous beauty in blue-black tone; No. 7, a river-view, a long narrow boat lying near the bank, and a row of small trees a short distance beyond, the sky slightly clouded; No. 11, a bit of a river seen through a line of slender trees, a row of white modern houses bordering the further bank; No. 16, a farm in the country, surrounded by low shrubbery, low hills in the distance; No. 12, a village with houses closely resembling Swiss chalets, the roofs held down with stones, snow-covered mountains forming the distant background; No. 13, a low-toned view of a village-street in quickly vanishing perspective, a tree-covered hill forming the immediate background; No. 14, a group of small, birch-like trees standing in a vegetable-field, relieved against a range of low mountains, light fleecy clouds overhead—a charming landscape of quiet, restful beauty; No. 6, view of a lake, a native schooner lying at anchor, white-capped waves rolling in, a distant shore with low-lying clouds forming the farthest background; No. 3, scene near a freight-house, men pushing short cars on rails, two handsome poplar-trees at the right—a picture of novel design and uncommon beauty; No. 2, a landscape, trees grouped at left, and a stretch of meadow at right, with low hills in distance, and the sky filled with fast-moving clouds—a picture vividly Corot-like in simple and soulful beauty.

It is the purpose of PHOTO-ERA to publish a few of these examples of Japanese photo-pictorial art, and our readers may judge for themselves what artistic ability has been developed by camerists in the Flowery Kingdom.



THERE is no doubt that Japanese pictorialists have been influenced by over-seas master-photographers—but Japanese art is an individual native product; so is the work of these photo-pictorialists.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

| *These figures must be increased up to five times if the light is inclined to be yellow or red.<br>†Latitude 60° N. multiply by 3;<br>55° × 2; 52° × 2; 30° × $\frac{3}{4}$ .<br>‡Latitude 60° N. multiply by 2;<br>55° × 2; 52° × $\frac{1}{2}$ ; 30° × $\frac{3}{4}$ .<br>§Latitude 60° N. multiply by $\frac{1}{4}$ ;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .<br>‖Latitude 60° N. multiply by $\frac{1}{4}$ ;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .<br>HOUR | MONTH AND WEATHER     |                |                |               |               |                |                |                |                |               |                              |                |                |               |               |                      |                |                |               |                |
|--|-----------------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------|----------------|---------------|------------------------------|----------------|----------------|---------------|---------------|----------------------|----------------|----------------|---------------|----------------|
|  | JAN.,<br>NOV., DEC. † |                |                |               |               | FEB., OCT. ‡   |                |                |                |               | MAR., APR.,<br>AUG., SEPT. ‖ |                |                |               |               | MAY, JUNE,<br>JULY § |                |                |               |                |
|  | Bright Sun            | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun     | Hazy Sun       | Diffused Light | Dull           | Very Dull     | Bright Sun                   | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun           | Hazy Sun       | Diffused Light | Dull          | Very Dull      |
|  |                       |                |                |               |               |                |                |                |                |               |                              |                |                |               |               |                      |                |                |               |                |
| 11 A.M. to 1 P.M.  | $\frac{1}{32}$        | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{32}$ | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{1}{50}$               | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$  |
| 10-11 A.M. and 1-2 P.M.  | $\frac{1}{25}$        | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$  |
| 9-10 A.M. and 2-3 P.M.   | $\frac{1}{12}$        | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1^*$         | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$  | $1^*$         | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{50}$       | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$  |
| 8-9 A.M. and 3-4 P.M.  |                       |                |                |               |               | $\frac{1}{5}$  | $\frac{1}{2}$  | $1^*$          | $1\frac{1}{2}$ | $3^*$         | $\frac{1}{30}$               | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{30}$       | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$  |
| 7-8 A.M. and 4-5 P.M.  |                       |                |                |               |               |                |                |                |                |               | $\frac{1}{20}$               | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{1}{20}$       | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$ | $\frac{2}{3}$  |
| 6-7 A.M. and 5-6 P.M.  |                       |                |                |               |               |                |                |                |                |               | $\frac{1}{15}$               | $\frac{1}{8}$  | $\frac{1}{2}$  | $\frac{3}{4}$ | $1^*$         | $\frac{1}{15}$       | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{3}{4}$  |
| 5-6 A.M. and 6-7 P.M.  |                       |                |                |               |               |                |                |                |                |               |                              |                |                |               |               | $\frac{1}{10}$       | $\frac{1}{5}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1\frac{1}{2}$ |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky ;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground ;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground ;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground ;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade ;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks,** ravines, glades and under the trees. **Wood- interiors** not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.



# For Perpetual Reference

For other stops multiply by the number  
in the third column

|  |           |       |       |
|--|-----------|-------|-------|
| As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops. | U. S. 1   | F/4   | × 1/4 |
|  | U. S. 2   | F/5.6 | × 1/2 |
|  | U. S. 2.4 | F/6.3 | × 5/8 |
|  | U. S. 3   | F/7   | × 3/4 |
|  | U. S. 8   | F/11  | × 2   |
|  | U. S. 16  | F/16  | × 4   |
|  | U. S. 32  | F/22  | × 8   |
|  | U. S. 64  | F/32  | × 16  |

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
Ansco Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Imperial Special Sensitive  
Seed Gilt Edge 30  
Wellington Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
Barnet Red Seal  
Cramer Instantaneous Iso.  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
American  
Ansco Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film  
Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome



## OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE portrait that graces the front-cover and page 71 is a beautiful representation of young girlhood. If the artist desired to convey an idea of innocence and simplicity, he has succeeded extremely well. But the expression in the girl's face seems to suggest even more — a feeling of premonition, of doubt, hence the title, "The Vision." Viewed as a technical performance, the picture commands admiration, the distribution of the light with due appreciation of the color-values showing masterly control. The arrangement of the figure, notably the hands, evinces true artistic ability. The original print was contributed by Mr. Halldorson to the monthly flashlight competition — which closed January 31 — but with the special request, "not for competition." The Publisher complied reluctantly, as it doubtless would have captured the first prize. Data: Made in professional studio, with Halldorson Home-Portrait Flashlamp; 7 grains flashpowder; 8 x 10 Eastman Portrait-Film; pyro; 17-inch Somerville lens, used at full opening; 8 x 10 Artura Iris print; lamp used four feet from sitter at 45 degrees angle.

The frontispiece again testifies to the artistic skill of Mr. Halldorson. It expresses an ecstatic phase of a classical dance by a graceful terpsichorean devotee. Data: Similar to preceding.

The illustrations accompanying Mr. Davis' article, pages 57-62, are of the unvarying artistic excellence that has been referred to so frequently in these pages. Data: "Snow-Tracery" — rambler rose-bush, taken during a snow-storm, April 3, at 5 P.M.; lens at F/6.3;  $\frac{1}{2}$  second; Double Coated Ortho. "Cherry-Blossoms" — arranged in studio; May afternoon; cloudy-bright; Roebuck Double-Coated Ortho; stop, F/11; Ingento A filter; 60 seconds. "Plum-Blossoms" — early May, 5.10 P.M.; taken against the light; good sunshine; stop, F/22; same filter and plate; 6 seconds. "Frost on the Window-Pane" — morning; west-window, from indoors; stop, F/11; same filter; Inst. Iso backed; 4 seconds; as such subjects usually lack good contrast, the plates require full development in a restrained solution, such as a bromo-hydro formula. "Ice-Crowned" — at Long Island Sound shore, on a February day, at 5.15 P.M.; icicles lighted from one side by setting sun; F/11 stop; Wellington Anti-Screen backed; Ingento A ray-filter;  $\frac{1}{2}$  second. "From Field and Orchard" — against the light; 2 P.M. in November; hazy sunshine; F/16 stop; same ray-filter; Inst. Iso; 1 second.

Charles S. Olcott, a skilled and tasteful photographer, will be remembered in connection with his admirable article, "The Art of Book-Illustrating," published in PHOTO-ERA, November, 1913. He now treats a very different subject, and one that affects those camerists who, unless weather conditions are perfect, lose patience and temporarily abandon picture-making. I leave it to any one to judge for himself as to the positively artistic merit of each of the eight examples shown by Mr. Olcott — pages 63-68. Data: Wayside Inn (Sudbury, Mass.) — February, 1 P.M.; dull light; 7-inch lens; F/16 stop;  $\frac{1}{2}$  second; Cramer Inst. Iso; Rytol; made during snow-storm; page 63. Mirror Lake — Same lens and stop; May; dull light; snow-storm;  $\frac{1}{2}$  second; page 64. Yosemite Falls — May, 11 A.M.; dull light; wide-angle lens; F/11 stop; 1 second; Cramer Med. Iso; page 65. The Happy Isles (Yosemite National Park) —

May, dull light; 7-inch lens; F/16 stop;  $\frac{1}{2}$  second; rain; Cramer Med. Iso; page 65. The Brook (Sudbury, Mass.) — February, 1 P.M.; dull light; 7-inch lens; F/16 stop;  $\frac{1}{2}$  second; snow-storm; Cramer Inst. Iso; page 66. The Vernal Fall — May, 10 A.M.; dull light; 7-inch lens; F/8 stop;  $\frac{1}{2}$  second; heavy rain; Cramer Med. Iso; page 67. A Shower in the Yosemite — May, 3.30 P.M.; dull light; 11 $\frac{3}{8}$ -inch lens; F/45 stop; 4 seconds; rain; Cramer Med. Iso; page 67. Lower Yosemite Fall — May, 9 A.M.; good light; tele-photo lens; F/16 stop; magnified 6 times; 6 seconds; Cramer Med. Iso; page 68. All exposures made with 5 x 7 Century Grand; with two exceptions, B. & L. Zeiss Protar lens was used; most plates developed with Rytol.

Though "Sunset on the Bay," page 72, is a subject with which we are all familiar, it has been managed, throughout, with commendable skill by our new contributor, Carl Hermes. Data: August, 6 P.M.; diffused sunlight; 3A Graflex; 5 x 7 (Ic) B. & L. Tessar; stop, F/5.6; A. B. & J. ray-filter; Eastman N. C. film;  $\frac{3}{10}$  second; 5 x 7 Azo H print.

Despite the efforts of men high in office to belittle, even to vilify, the Father of his Country, George Washington, who stuck to the poor remnant of Continentals at Valley Forge, and ultimately gained the victory, he will continue to be held in high esteem by true and loyal Americans; and Mt. Vernon will not cease to be a shrine worthy the respectful consideration not only of Americans, but of lovers of freedom throughout the world. An excellent picture of this shrine, Mount Vernon, by Carl H. Kattelmann, appears on page 75. It is similar to one that was published in PHOTO-ERA just a year ago, and by the same artist, only, being a nearer view, it shows the historic edifice to better advantage. Data: August, 1 P.M.; sunshine; 5 x 7 Premo; Kodak Anastigmat; 6 $\frac{1}{2}$ -inch focus; F/16 stop; 3-time color-screen; 1 second; Standard Ortho; pyro. tank; 5 x 7 print on Azo A Hard.

The photographs, pages 78 to 82, singly or in groups, that illustrate S. A. Weakley's camera-trip through the Blue Ridge Mountains, are typical of the locality, and the subjects lend themselves easily to artistic interpretation. Mr. Weakley's efforts, however, appear to be somewhat in the nature of records, and occasionally unfavorable weather may have hindered him from doing certain subjects greater justice. In that case, he may profit by Mr. Charles A. Olcott's experience in conquering rain and wind. But Mr. Weakley has succeeded, at least, in suggesting the genuine scenic beauty of the Blue Ridge Mountains, which many camerists will be glad to visit.

The three views on page 78 represent the Black Mountains Railway station and the North Fork of the Swannanoa River, N. C. Below is a fine prospect of the Great Craggy Mountains — Craggy Pinnacle, Craggy Dome and Bullhead (in extreme distance); made with U. S. 16 stop and color-screen, and in  $\frac{1}{16}$  second.

Mt. Mitchell, page 79, color-screen; stop U. S. 16;  $\frac{1}{2}$  second.

Full-page group, page 81, comprising from top to bottom, first row, train to summit of Mt. Mitchell (oval); Clingman's Peak (6,611 feet) and Mt. Mitchell (6,711 feet), taken August 9, 1916; View from Brown's

Pasture (3,800 feet) towards Great Craggy Mountains, August 8, 1916; Nestling Among the Great Craggy Mountains (circular), August 11, 1916. Shack on top of Mt. Mitchell, used by campers, August 10, 1916;  $\frac{1}{10}$  second; U. S. 8 stop; no screen. Blue Ridge Divide, east of Asheville. Great Craggy Mountains. Robert Lee Hall, from pool, August 8, 1916; U. S. stop 16; no ray-filter;  $\frac{1}{10}$  second. Swinging track of Southern Railway, east of Asheville, after flood of July, 1916; August 7, 1916; U. S. stop 4; no screen;  $\frac{1}{25}$  second. Observatory, flying highest American flag in the U. S. east of the Rockies, on Mt. Mitchell, elevation 6,750 feet. Shaeks on crest of Mt. Mitchell (6,711 feet), August 10, 1916;  $\frac{1}{10}$  second; stop U. S. 8; no screen. "In the Land of the Sky," North Carolina, August 9, 1916;  $\frac{1}{10}$  second; stop U. S. 16; color-screen. Robert Lee Hall, from top of mountains in the rear (4,200 feet), August 6, 1916 (circular).

Panorama from Robert Lee Hall, page 82, August 8, 1916; U. S. stop 64;  $\frac{1}{2}$  second; color-screen.

### Advanced Workers' Competition

BERTRAM F. HAWLEY's picture, page 85, breathes the spirit of camp-life. It is well composed, and nothing seems to jar the serenity of the scene. The young men are not posing; they are watching the coffee boil, or, maybe, there is a lull in the conversation. The principal objects stand out in pleasing relief, and nothing in the general setting is sacrificed. Data: August, 1916; bright noon-sunshine; 8-inch Cooke; F/8 stop;  $\frac{1}{50}$  second; 4 x 5 Wellington Extra Speedy; pyro-acetone; enlarged on II grade Azo.

An element in camp-life is preparing the meal. This duty is being attended to in F. W. Kent's picture, page 87. It's going to be "broiled duck," to judge by what is going on. The shotgun, a mute witness in the process of getting the game, forms an important accessory in the composition, but its disposition and treatment could be improved. This, and the curtailment of space above the figure of the camper, are the only faults in this interesting scene. Data: March 24, 1916, 4 P.M.; dull light; 3A Graflex; Voigtlander & Son's Collinear II; 8-inch focus; F/8 stop; Eastman film; pyro;  $\frac{1}{25}$  second; 8 x 10 bromide enlargement.

### Beginners' Competition

For originality and action, "A Long Cast," page 91, is very commendable. The allotment of space, to afford the sportsman room in which to work, was a happy thought, although one regrets that the clouds in the generous sky were not more assertive. Data: September, 11 A.M.; bright light; 4 x 5 Speed Graphic; Voigtlander & Son's Heliar;  $5\frac{1}{2}$ -inch focus; F/8 stop;  $\frac{1}{60}$  second; Inst. Iso; Ortol, tank; enlarged on P. M. C. No. 8 Bromide; developed in Acid Amidol.

"The Mower," page 93, is a pleasing departure from the hackneyed way in which this favorite theme is generally treated. The lofty trees, in the middle distance, constitute a welcome feature, here, and a foil to the horse-drawn machine. There is variety throughout the picture, yet the unity is not disturbed, albeit the eye is apt to linger on the distant meadow made conspicuous by the brilliant sun. The vigor and the feeling of air and sunshine expressed by the artist are striking, commendable qualities here. Data: July, 1916, 5 P.M.; bright sunlight; Ica camera fitted with Carl Zeiss F 4.5 Tessar, at full aperture;  $\frac{1}{50}$  second; 9 x 12 cm. Standard Ortho; Rytol; bromide enlargement; developed in M. Q.

Profiting by an ideal illumination of this well-known feature of the Yosemite, W. K. Waters made the best

of his subject—"The Three Brothers"—page 94. The viewpoint is a capital one, and there is an absence of that painful clearness of definition which characterizes the commercial photograph of this attractive group, and it has a suggestion of atmosphere that gives an artistic distinction to Mr. Waters' view. Data: clear day; Ansco Anastigmat F/6.3; 5-inch focus; F/32 stop; 1 second; 3-time color-screen; Standard Orthonon; pyro, in tray; enlarged on P. M. C. No. 2.

### Our "Miscellaneous" Quarterly Competition

MANY workers occasionally produce pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions. It should be borne in mind that pictures offered elsewhere and rejected may not be suitable.

### For Artificial-Light Exposures

Now that a great deal of photography can be done by ordinary domestic artificial light—thanks to wide-aperture lenses and rapid plates or films—it is perhaps as well to remind those who use ortho. or iso. plates or films that a color-screen for the lens is generally unnecessary. The yellow character of the light is responsible for this, and no one who has done any work of this kind can fail to be struck very forcibly with the improved color-value obtained. Objects containing bad photographic colors, such as reds, yellows, etc., are also at their best when photographed as above described. The secret of success seems to be a very generous exposure, and as most subjects likely to be attempted in this class of work are stationary, there is no reason why it should not be given.

*Amateur Photographer.*

### To Avoid Stress-Marks When Cutting Bromide Paper

ACCORDING to F. H. B. S., in the *Amateur Photographer*, it is sometimes found necessary to cut large sheets of bromide paper into smaller portions. If, however, the paper is not handled with extreme caution, it will show stress-marks where one's fingers have come in contact with the emulsion-surface, or where it has been rubbed. A good method to employ, when it is desired to cut up paper, is to gently place two pieces *face to face*, and cut them together. The cutting should be done on a sheet of zinc or a hard-surfaced millboard by means of a keen-edged knife, which will sever through both pieces of paper at the first attempt. Another and a preferable procedure is to cut the two papers with a suitable print-trimmer; the resulting smaller pieces being produced to the required size by measuring off against the lineal scale with which most all print-trimming boards are equipped.

### When Gabriel Blew His Horn

*Editor (soliloquizing, as he prepared his up-to-date list of American camera clubs)*—"Boston Camera Club! Strange they don't reply to my inquiry-blank. Well, I guess I'll add them to the live ones." As a matter of fact, the B. C. C. passed out of sight and out of mind in 1911. It was practically dead before that.





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## His Wife's Face

THE following incident is from the *British Journal*. On the ground that the photographer had not fulfilled a condition to "make his wife's face narrower," George Luck, of Velross Road, Highbury, N., in Clerkenwell County Court last week, resisted a claim by Isidore Rose, of Stroud Green, N., for £2, for wedding-party photographs.

The plaintiff said a proof of the photographs was returned by the defendant, who said his wife looked too stout in the picture. Having altered the negative, he sent the photographs, but the defendant returned them.

*The Defendant:* "There is a finger sticking out. I told him to take the finger off. Then my wife's face was too wide. He said he could alter it, but he had not altered anything."

*Judge Roberts* (examining the photograph) remarked to the defendant: "You have a thumb sticking out in a masterful way." (Laughter.)

*The Defendant:* "That is right." (Laughter.)

*Mr. Welllake* (*Mr. Rose's solicitor*): "I shall suggest contributory negligence on the defendant's part in having his thumb up." (Laughter.)

The defendant said that the order was given on condition that the proofs were altered according to instructions. His wife's face was rather wide, and plaintiff was to make it narrower. He was also to alter the finger.

*His Honor* (looking at the picture again): "I confess I cannot see anything wrong."

*The Defendant:* "But it is not like my wife at all." (Laughter.)

*His Honor:* "As she is not here I cannot say."

*The Defendant:* "As to my wife's face, he said he could alter that."

*His Honor:* "And he says he has."

*Mr. Welllake:* "It is your wife's objection to these photographs?"

*Defendant:* "Yes, but her objection is my objection." (Laughter.)

His Honor gave judgment for the amount claimed.

## Moving Pictures on Sunday

SEEING the above caption, recently, in so exemplary and respected a paper as the *Boston Evening Transcript*, I at once surmised that it heralded a puritanical objection to so innocent a recreation as moving framed pictures from one room to another. If the activity referred to meant the more strenuous one of transporting heavily framed pictures by van, electric or horse-drawn, I could see that in a fashionable neighborhood such a proceeding might become the object of general criticism and — but here my eyes again fell on the legend, in heavy-face type. Immediately below, in slender seven-point nonpareil and bracketed, appeared, "From the Brooklyn Eagle." Then the two-stick paragraph was not an original product, after all, but a quotation. I eagerly perused the item and found that, according to a statute, the showing of motion-pictures in Brooklyn, on Sunday, was prohibited; so were shooting, hunting, fishing, gaming, horse-racing, or other public sports, exercises or shows. The matter is now before the courts. To be and to seem!

## A Wizard

WE are indebted to the *Amateur Photographer* for the following true story:

A radiographer at one of the military hospitals had been examining a wounded soldier under the fluorescent screen by means of X-rays. He was endeavoring to locate a bullet which was thought to be embedded in the tissues. The position of the bullet was at last ascertained, the whole operation being carried out in the darkness necessary for screening. When it was over, the radiographer retired to his desk to write up the report, and presently the sister came to him smiling in a peculiar way. He asked her what was the reason for her merriment, whereupon she told him that Tommy had said to her, "I say, yon's a clever chap. If he could see all that in the dark, what would he have seen if the light had been up!"

## Christmas-Echoes

A CERTAIN photo-publisher, thinking that the little verses contained in the folding Christmas cards were cast in one and the same mould — though some are more expressive than others — sent one to a friend's secretary with whom he had conversed by telephone, but whom he had never seen. The subsequent coolness of the young woman — who happened to be of the chubby-club-chubby kind — towards the sender, was due to the following tactless Christmas-verse:

"Your stocking is n't large enough  
To hold what I would send,  
Of Joy and Christmas Happiness,  
To you, my dear old friend."

## Edward H. Weston Enjoys a Pun

*My dear Mr. French:*

In your reference to the Salon pictures of the National Convention, you paid me a nice little compliment when you said, "handled as only a Weston can." Many thanks. I take off my hat!

Here is a good one. Not long ago I brought home a grand-prize cup I had won, to show to my wife. Putting it on the table, I gazed at it admiringly, when in burst my youngest and voiced his approval with, "O papa, who blot (brought) the can?"

With best wishes,  
EDWARD HENRY WESTON.

## Exempt

THE teacher was giving the school a little lecture on good conduct.

"Avoid criticizing," she said.

"Don't make a practice of finding fault with other people, or picking flaws in what they say or do."

"Teacher," spoke up a little boy, "that's the way my father makes his livin'!"

"You surprise me, George! What is your father's occupation?"

"He criticizes pictures for a photo-magazine, ma'am."

The teacher coughed. "Well, George," she said, "I make an exception in the case of your father."

(With apologies to *Youth's Companion*.)



## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### Photo-Era Increases Its Price

IN consequence of the extraordinary rise in the cost of coated paper, printing and halftones — due to the European war — the Publisher has been obliged to advance the subscription-price of PHOTO-ERA from \$1.50 to \$2.00; single copy, from 15 cents to 20 cents.

The slight increase in price will go into effect March 1, 1917, and subscriptions received before that date will be accorded the old rate, viz., \$1.50 a year; clubbing-price, \$1.25.

Whereas the slight increase of fifty cents may not mean much to the individual subscriber, in the aggregate it is vitally important to the Publisher, as it will enable him to help meet the greatly increased expenses of publishing PHOTO-ERA without diminishing its many excellences that have given it the high reputation it enjoys among photographic magazines.

### Oregon Camera Club Resuscitating

THE first of a series of regular monthly meetings of the Oregon Camera Club, Portland, Ore., was held Tuesday evening, November 21, in its club rooms in the Washington Building. The attendance and the enthusiastic appreciation of the members and guests were beyond all expectations of the entertainment committee which so ably conducted the affair.

A large part of the evening's entertainment was taken up with a lantern-slide treat by Mr. Luetters, of the Winter Photo Company, this city. All the slides were hand-colored ones made by the Winter Photo Company, and were pronounced by connoisseurs fully equal, and in most instances superior to the natural-color-photography slides. The views comprised the most interesting scenic spots in the Northwest, including Crater Lake, Three Sisters, Mt. Jefferson, Mt. Adams, Columbia River Highway, Mt. Rainier and various places along the Oregon coast. The latter part of Mr. Luetters' lecture dealt with photographic experiments as conducted by his firm, in which they are able to obtain various pictorial effects in their slides and prints by control in printing and variation in color. Several views were thrown on the screen by way of illustration, the first being a sunrise as it really appeared when photographed, the next slide showing a moonlight-effect made from the same negative, and a third one showing the same scene as representing a sunset. Record-slides of several Mazama trips also proved exceedingly interesting to the club-members, as a great many of them belonged to the mountain-climbers' organization.

Colored stereopticon views along the Northern Pacific lines, in Oregon, Washington and California, and also Yellowstone National Park, were shown by Harry Smith, one of the Camera Club's most enthusiastic workers. Mr. Smith has been in the railroad-business for a number of years, and his familiarity with the sections of country pictured and his interesting descriptions made the exhibition very enjoyable.

Will H. Walker, well known in the photographic world for his excellent productions, seized the opportunity to inform the several amateur photographer visitors of the benefits to be derived by membership in the club and the close contact with the advanced

workers in the club, who were always ready to guide the recruit over the rough places, and show him the hows and whys of photographic success. Mr. Walker also called attention to the club's future program, emphasizing the value to be derived from the series of lectures on photographic topics, which will begin at the next meeting of the club. The rest of the evening was spent in card-games and sociability, while palatable refreshments were being served, after which every one partook of a plentiful supply of cigars.

The committee in charge of this first entertainment was composed of Chas. A. Benz, W. H. Nourse, R. L. Baldwin, R. S. Milln, J. N. Olson and A. A. Bailey, Jr., who will also have charge of the next two monthly meetings of the club.

The next meeting was held on December 19 at the club-rooms, when Mr. Benz explained the Paget natural-color photography process and exhibited a number of his natural-color slides. A number of Paget color-slides, made by Frank Ives Jones of the Columbia River Highway, were also exhibited.

The Oregon Camera Club is looking forward to the coming spring, when club-outings will again be in order, as those of the past have proved highly enjoyable and profitable. A large majority of the club's prize-winning pictures have been made on these photographic jaunts, and the tyros have found it of great value to be able to intermingle with the advanced workers and profit by their many years of experience in picture-making.

The entertainment-committee predicts for 1917 the most enjoyable and most profitable summer-season of the club's history, and with these regular monthly meetings, and the enthusiasm displayed by the live-wire members of the club, the long, dark winter-evenings will no longer be the bane of the amateur photographer.

A. A. BAILEY, Jr.

### Pittsburgh Salon

THE annual Pittsburgh Salon will be open to the public March 1 to 31 inclusive, 1917, in the galleries of the Carnegie Institute. All prints to be unframed, hung under glass. Last day of entry will be February 10, 1917. For entry-blank and information, write C. E. Beeson, Secretary, 19th Floor, Frick Building, Pittsburgh, Pa., who will give inquiries prompt attention.

### The Los Angeles Camera-Pictorialists

THIS organization will hold an International Salon at the Museum of Art and Science during the month of November, 1917. Louis Fleckenstein, the well-known pictorialist and professional portrait-photographer, is chairman of the committee, and has recently completed arrangements with the curator of the Museum for this exhibition, which promises to be one of exceptional excellence and interest.

### A Triumph in Flashlight-Portraiture

ONE of the most successful portraits made by flashlight is by T. E. Halldorson, of Chicago, and adorns this month's front-cover. Clear definition, soft illumination, round and correct modeling and true flesh-values mark this beautiful picture.



## Machine Makes Photographs of the Human Voice

A MACHINE that shows how sound looks was demonstrated at one of the sessions of the American Association for the Advancement of Science, in New York, recently.

The sound-machine, which is called the "phonodeik," was exhibited by Prof. Dayton C. Miller, of the Case School of Applied Science, Cleveland, U. S. A. He explained that the instrument photographs the vibrations of the human diaphragm, governing the volume and cadences of the voice, and projects them, magnified 40,000 times, on a screen.

Then Prof. Miller spoke the word "war" into the machine and a confused, irregular blot of light flashed up on the screen. Pronunciation of "peace" produced in marked contrast a mild glow regularly and delicately outlined. A record of Caruso's voice caused a broad, violently fluctuating line of light, whereas Tetrazini's voice showed as a finely penciled dancing path of light. A record of the sextet from "Lucia" showed the individual characteristics of the singers in a flurry of light on the screen.

## Burning-Accident in Studio

WHILE Miss Beatrice Baker was having a sitting made in the studio of C. B. Dahlgren, in Weehawken, N. J., she was seriously burned.

Her dress caught fire from a gas-heater. Mr. Dahlgren immediately extinguished the fire by wrapping his coat about the girl. Only a few sparks remained, when the girl ran from the room and the sparks were fanned into a flame. When the fire was finally extinguished, she was so severely burned that she died three days later. Mr. Dahlgren did all that possibly could be done to prevent serious accident, and the parents of Miss Baker completely vindicate him of all blame.

*The Association-News.*

## The Ownership of Negatives

FRANCIS T. NAGORSKI, an attorney of Erie, Pa., has this to say regarding the ownership of negatives.

There seems to be a prevalent idea amongst the photographers that the negatives belong to them. It may be that the photographers do not make a charge for the negatives when setting their price on photographs, and they habitually retain the negatives with the hope and expectation that more prints will be ordered. It was decided in 59 Federal Reporter, page 325, that the sitter for photographs acquires the right to the negative and to the reproduction of photographs therefrom.

It is, no doubt, understood by the profession at large that they may not reproduce photographs without the permission of the sitter unless the photograph is made without any consideration of some public or prominent person. I do not mean to say that the photographer is compelled to give up his negatives without receiving pay for them, but if a customer demands the negatives, and offers to pay for them a reasonable and proper fee, the photographer is compelled to deliver the negatives, in the absence of a contract expressed or implied.

There appears to be some dictum, in the reported cases, on the question of reproducing prints from negatives without the consent of the customer, that the negatives "may belong to the photographer." However, dictum is not law, and the case reported in the 59 Federal Reporter, at page 325, above cited, seems to set this dictum aside, and declares that the negatives and all rights therein belong to the customer.

*The Association-News.*

## Fraudulent Advertising

It is with satisfaction that we note the conviction of a certain corporation for dishonest advertising. Thanks to C. E. LaVigne, formerly director of the Bureau of Investigation of the *New York Tribune*, the corporation in question was fined \$300, and its secretary treasurer was sentenced to sixty days in jail. It developed that goods which cost \$3.50 had been marked and advertised to be worth \$10 or \$12. In short, the price to the consumer was not based upon the cost, but upon the selling-price which the corporation decided the public would pay. According to the defendant, valuation is only a matter of opinion, and to sell an article for \$10 when it cost but \$3.50 was a matter that needed no apology. We are glad to learn that the jury decided otherwise. Indeed, it needed but four minutes to reach a decision in this important case.

But why the advertising medium of fraudulent offers in business and finance should not likewise be punished passes the comprehension of right-thinking persons.

## The Bostonian

HE was from Boston; which surpasses being from Missouri.

His habit of mind was not so much the "show me," as the "Q. E. D." There are no fallacies in Boston.

So I was not surprised when he said in his cool, level tones, without heat, passion, vehemence or undue emphasis: "Please see, if possible, that I get upper left-hand quarter of a left-hand page. I know you do not wish me to write this in the order; but, of course, I should prefer that position."

"Why?" I asked, with sudden stern resolve.

"Why?" he repeated, narrowly avoiding a tone of slight surprise.

"Yes," said I, "why not follow the flock that follows the first bell-wether that was salted into the blind trail, and ask for upper right-hand quarter right-hand page."

"Every man, woman and child," he answered, "who opens a book or magazine, looks to the upper left-hand corner of the left-hand page — could n't read it otherwise. This habit becomes one of the most invariable habits of the human eye. It gets to be automatic. It is imbedded finally in the subconscious mind. You do it yourself — do it when you look at the advertising-pages. Watch yourself, and you will find out. It's invariable."

I regarded him impassionately.

"Moreover," he went on, "as we walk the streets our eyes constantly turn to the left, for there the human stream passes us by — queer faces, ungainly figures, outlandish costumes, Huns, Magyars, Poles, Danes, Chicago men and pretty girls — all go by on the left. If we ride or drive, it is the same rule of the road: keep to the right side, but watch out for collisions on the left. There approach the gay, dashing, staid, splendid or rustic turnouts from up the road — eyes left! or we miss the charming smile of Miss Millionbucks."

"Finally," he added, with a shadow of a smile on his classic lips, "finally, remember this: Since man began to fight he has carried his shield over his left arm to protect his heart, and held his weapon in his right hand — hence almost universal right-handedness. His eyes, peering over the rim of his shield, turned to the left, always, to watch his foe.

"So stood the gladiator in the Roman arena. So John L. Watch the rifleman. The eyes of the human race look to the left. Put my advertisement there!"

*Little Cos.*





## WITH THE TRADE



### An Important Professional Studio-Lamp

PORTRAIT-PHOTOGRAPHERS will be interested in the improved Panchroma Twin-Are lamp for portraiture. Judging from the descriptive catalog, issued by the manufacturers and agents, the Allison & Hadaway Corp., of New York City, this illuminating-device is one of the most powerful and flexible ever placed upon the market—in fact, it is one of the innovations of the year. The lamp can be adjusted to any height or angle, and, being on casters, it can be moved to any desired position with rapidity and ease.

The advantages of this remarkable studio-lamp can best be appreciated by reading the elaborate description, above referred to, and copy of which will be sent on request by the Allison & Hadaway Corporation.

### Stycktyte Invisible Art-Mounts

WE learn from dealers and customers that the new Stycktyte Invisible Art-Mounts, supplied by G. Gennert, of New York, are winning high favor. Each strip will suffice to mount from one to six pictures, hinged or attached by the corners to the mount, as desired. A sample package with full directions may be obtained for ten cents.

### Burke and James, Jobbers for Universal Camera Company

THE exclusive wholesale selling-agency for all the products of the Universal Camera Company has been acquired by Burke and James, Inc., of Chicago. This motion-picture camera—and other Universal Camera Company's products—is used and esteemed highly throughout the trade. Burke and James, Inc., announce that they have an excellent opportunity to offer to dealers. An interesting and well-illustrated catalog describing the Universal camera and accessories is now ready for distribution.

### All Is Not Gold That Glitters

THE annual group-photograph of the City Council is justly regarded as a gold-mine. Just look at the possibilities! But this year this photographic "joy-ride" is to be omitted. The Council—somewhere in Massachusetts—voted otherwise. Whether the investment looks more remunerative if diverted into another channel, or whether the official photographer erred in diplomacy, is not disclosed.

Having heard a good deal about this kind of government-photography, PHOTO-ERA is not disposed to commiserate the o. p., for he once told us that the bother and expense of giving so many free sittings, and supplying a somewhat unfair number of photographs to the go-betweens, more than neutralized the profit made on the official group-picture. The advertising it yielded him was of an uncertain character, and he never succeeded in getting many customers of the straight paying kind. Photographers who think that they see good business in that kind of portraiture should stop to do a little calculating. Then, they would not be so eager to angle for that sort of patronage.

### Christmas and New Year's Interchange

It has been the custom of PHOTO-ERA for several years past—and it initiated this custom in the American photographic press—to print a list of those of its subscribers and advertisers who had sent Christmas and New Year's greetings. But their number was so large, during the recent holiday season, that, to give it in detail, might be construed as savoring of commercialism or favoritism. Therefore, PHOTO-ERA prefers to thank its many well-wishers as one brilliant and whole-souled aggregation, and to reciprocate their hearty greetings for a happy and prosperous year.

### Russian Optical Glass

IN the Russian glass-industry steps have been taken to manufacture optical glass. Certain serious difficulties have been experienced, but it is hoped by the manufacturers that these will be gradually overcome.

### Flashlight-Powders

IN a recent German patent the use of finely divided rare earth-metals, such as zirconium, thorium and titanium, in admixture with their nitrates or perchlorates, is claimed by E. Wedekind and Geka-Werke of Dr. G. Krebs.

### A Question of Wages

THE salaried man sees no general fattening of pay-envelopes to meet the soaring cost of food and clothing.—*The Boston Herald.*

This is undoubtedly true; but is n't it better for him to continue to receive, regularly, his stipulated wage—while his employer may be struggling to maintain himself and to keep from being forced into bankruptcy—rather than to lose his job altogether?

### A Fable

A DUCK which had laid several dozen large eggs complained that she received no recognition for this achievement.

"That hen over there," she complained, "who has not laid as many and as large eggs as I have, is praised in books and poetry; whereas I am not even mentioned."

"The trouble is," explained a cockerel who had listened to her, "that you do not give publicity to what you have done. You lay an egg, and then you waddle quietly away without speaking of it. The hen, on the other hand, lays no egg without making a great noise about it, so that the whole neighborhood is informed of the event."

This fable should be remembered by those who do not advertise.—*Die Photographische Industrie.*

### A Lesson in Optics

*Doctor*—I diagnose all sicknesses from the patient's eyes. Now, your right eye tells me that your kidneys are affected.

*Patient*—Excuse me, doctor, but my right is a glass eye.—*Meggendorfer Blätter.*



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

ADVERTISING BY MOTION-PICTURES. By Ernest A. Dench. Cloth, 8vo, \$1.50. 48 chapters. 255 pages. Cincinnati: The Standard Publishing Company.

The author, Ernest A. Dench, has written considerably for the photographic press on the subject of Kinematography, and now presents the subject, as a medium for publicity in various lines of business, in the form of a very readable book. The matter is arranged systematically and conveniently in forty-eight short chapters, each of which is devoted to a special industry or business. Numerous examples of the successful application of motion-picture photography to publicity are cited, particularly by the George E. Keith Company, in the popular film "The Making of a Shoe." The merits of colored stereopticon-views — and *how they should be made* — and of motion-pictures, as applied to successful advertising, are fully described. The book is replete with novel and practical suggestions of the application of motion-pictures to advertising as a means to increase one's business, be it what it may. In this respect, alone, Mr. Dench's book makes a ten-strike.

Every merchant, as well as every owner of a taking-machine, and every amateur eager to make "good and easy money" in a new and inviting field, should speedily procure a copy of this book, in which a fascinating theme has been treated in a pleasing and convincing way by a thoroughly capable writer.

TEXAS THE MARVELOUS — THE STATE OF THE SIX FLAGS. Including accounts of the Spanish settlement and establishment of the Indian missions; the unfortunate expedition and death of La Salle; the stories of its hardy pioneers; the nine-year republic of Texas; the development of its cattle-ranches; the troublesome Mexican border; the wonderful gulf-coast; the Panhandle; the Black Waxy Belt; the timber-region; the Llano Estacado; the disappearing desert, and the general development of the marvelous state. By Nevin O. Winter. Cloth, decorative; large 8vo. Illustrated with six plates in color and forty-eight duogravures. Price, \$3.50 net; carriage-paid, \$3.75. Boston, U. S. A.: The Page Company.

The distinction of "The Marvelous," accorded to the state of Texas, is well deserved. Despite its great size, the Lone Star State is little known to the world at large. Its relatively large area has been found very convenient with which to estimate the size of Germany, France or Austro-Hungary. This land of illimitable distances, of enormous natural wealth and abundant harvests, has a history as interesting as that of any in the Union, and its pages glow with deeds of heroism and self-sacrifice of noble Texans. The native Texan points with pride to Stephen F. Austin, the father of Texas; to William B. Travis, of Alamo fame, and to the imposing figure of Sam Houston, the hero of San Jacinto and several times governor of the state; to

Deaf Smith, David Crockett, "Big Foot" Wallace and other valiant men. The story of the Texas Rangers is a thrilling one, and makes its successful appeal. Texas was originally a province of Mexico, but dissatisfied with the affairs of the mother republic, seceded and, with the aid of Sam Houston and other brave Americans, set up an independent republic, which endured nearly ten years. In 1845, on her own volition, Texas entered the Union.

But military glory and territorial extent alone do not make Texas great. It is rather her vast natural and agricultural resources — cotton, grain, rice, oil and fruits; cattle, sheep and horse-raising; mining and other industries — all of which keep an energetic and enterprising people actively employed, thus enriching the state. No genuine American can afford to ignore the manifold importance of Texas, America's largest state and one which is destined to play a great part in the future history of the Union. Mr. Winter has written the story of Texas with a graphic and accurate pen, and in a very entertaining manner.

### The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman — an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skilful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker — professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the publisher of PHOTO-ERA on receipt of \$2.00 each.





# RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



A PHOTO-Film Developing- or Changing-Box has just been patented as No. 1,207,036, by Henry K. Hennigh, of Newcastle, Ind. Claims: A film-box having sides, top and bottom, all in separable members, means to make the joints between the members impervious to light, said box having a sight-opening in the top and a window in one side, both covered with suitably colored material, screen-holding means on opposite sides of the sight-opening, a screen-section hinged to the box close to an edge of the sight-opening which is at right angles to those near which the screen-holding means are located, a pair of screen-sections hinged to said first section and adapted to be held in operative position by said screen-holding means, said box having hand-holes in two of its sides which are at right angles to the one with the window, and flexible, light-proof sleeves surrounding the hand-holes and extending, externally of the box, to envelop the operator's arms with a light-excluding fit.

Shutter-Operating Attachment for Cameras — James Edward Payne, of Campbell, Mo., assignor of one-half to Madison N. Payne, of Campbell, Mo. The number of this patent is 1,208,711.

Method of Rendering Scratches on Kinematograph Films Invisible — Hugo Russak and Otfried V. Hanstein, of Berlin, Schöneberg, Germany. Von Hanstein assignor to said Russak. Patent No. 1,208,664.

A Camera-Tripping Attachment has just been patented as No. 1,208,617, by John Russell Montague, of Niagara Falls, Ontario, Canada. What the inventor claims is substantially as follows: A tripping-attachment for the exposure-lever of a camera, comprising a tripping-lever, a spring for actuating the tripping-lever when released, means to release the tripping-lever, and a connecting-means including a spring leading from the said tripping-lever and adapted for connection with the exposure-lever to take up any shock when the tripping-lever is released.

Magazine Film-Holder for Cameras — Lodewyk J. R. Holst, of Philadelphia, assignor to Williams, Brown and Earle, Inc., of Philadelphia, Pa., a corporation of Pennsylvania. Patent No. 1,208,558.

Patent No. 1,208,344, for a Camera-Holding Device — Edward S. McAll, of Ilion, N. Y. The gist of the inventor's claims is: A camera-holding device comprising a base, a platform hinged thereto, feet adjacent to the ends of the hinge, and a clamp effective to hold the platform adjusted with relation to the base, these feet being fastened together and their length being less than that of the base and less than the width of that part of the base which is next to the hinge.

Patent No. 1,208,066, a Camera — Harney I. Williams, of Cincinnati, O.

## Method of Washing Film-Packs Quickly

READERS who employ the No. 1 Premo Film-Pack developing-tank in their work, will find a very satisfactory and rapid method to wash their negatives by inserting a piece of ordinary rubber-tubing — such as is used with water-bags is just the thing — in the nozzle of the bath-tub faucet, and the other end directly between either of the two openings at the top of the film-rack, pushing the tube down into the rack as far as it will go. The water may then be turned on, and,

due to the fact that it strikes directly in the center of the tank — away from the negatives — they cannot be injured even if the water is turned on with full force.

Since the water strikes at the bottom, all sediment is forced upwards and out at the top of the tank.

Negatives have been spotlessly washed and cleaned by this method in less than five minutes.

A great advantage in using this method is that the small strips of cloth which are glued to the negatives are loosened and rise to the top and flow over the sides of the tank with the water.

This method may also be applied when using the larger developing-tanks; but as these have no openings at the top of the racks, the tube will have to be inserted down the inside of the tank, between the band on the rack and the wall of the tank. — E. S. LINDMARK.

## Drying Film-Pack Negatives

A VERY satisfactory way to hang up film-pack negatives to dry is to stretch a piece of string between two supports or across a room and fasten the negatives to the string by snapping on ordinary O. K. paper-clips. These may be purchased at any stationery-store for a few cents a box. When so hung, negatives may be slipped along the string and separated to any distance required.

The O. K. paper-clips are far superior to the wooden-clips now on the market, as they can be made to grip the film much closer to the edge than the wooden-clip.

E. S. LINDMARK.

## The Height of a Camera

QUITE often the photographer may be puzzled to know how high to set up his camera when photographing a standing person. In most cases, it is best to have the camera-lens about level with the eyes of the person. The legs of many portable tripods are too short, whereas others have long ones that require to be placed so near together to obtain the right height that the tripod and camera are unstable. In the circumstances, it is advisable to find three objects of equal height that may be placed under each foot of the tripod to bring the lens to the correct position. When using a short-focus lens, it is usually advantageous — especially in interior-work — to have the camera lower, whereas when using a long-focus lens the camera may be placed higher to avoid distortion. When taking home-interiors, it is important to have the lens well above the level of the table-top, as the effect of the furniture, seen from a lower viewpoint, is apt to be unsatisfactory. It should be remembered particularly in architectural work that to photograph details from a position not readily accessible to the average spectator is a thing to be avoided.

## To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect.





THE "Official Exhibition of Canadian War-Photographs" was a notable event. In opening the exhibition on December the fourth, Sir George Perley (Acting High Commissioner for Canada) very feelingly said: "This work, brought as it were from the trenches, brings home the realization of what is going on there. It should move us to be more than ever determined to support the boys at the front." Perhaps never has the camera been made to yield so striking and graphic an account of dramatic episodes from real life as is shown here. The original negatives were roughly half-plate size; but wonders have been worked by enlarging on a huge and, of course, very exact scale, and we see veritable battle-scapes with figures almost life-size, some of the pictures being over eleven feet in length. One photograph shows Canadian troops in the act of leaping over the parapet to the charge. The individual expressions on the men's faces are delineated in sharp and unforgettable lines, and one can note the play of the muscles of their hands as they grip their rifles. Much of the work has been done under fire, during some of the greatest incidents in the fighting on the Somme. The artillery havoc, the gas-shells, the charging infantry, the tanks in action, the scenes in the trenches, are quick with life. These are the men who took Courcellette. The burst of shrapnel above the trenches is not put in by the artist. It was so real that it killed the man we see upon the parapet.

But the point that we particularly wish to emphasize is the pictorial effect of many of the pictures; for although this is a historical exhibition of facts without any pretensions to art, one cannot fail to be attracted to many of the photographs as marvelous compositions, so dignified and well balanced that they might be the work of great artists. We cannot help thinking that a good deal of selective ability must have been exercised in making the enlargements, or the photographer was indeed an artist, and kept his artistic perceptions in full play in very trying circumstances, for obviously many of the exhibits were obtained directly in the line of fire.

Americans may not be aware that it is a United States artist who has been given facilities to make drawings of the munitions-works of England as seen at full blast at the present day. Mr. Joseph Pennell is showing at the Guildhall Art Gallery (London) a series of over fifty lithographs, representing every phase of the terrifying energy that is turning England into one vast munition-making area. The work, at least as this celebrated artist has performed it, could not have been carried out in its entirety by photography; but there are possibilities in many of his subjects for the camera, and we can only hope that some gifted user — why not A. L. Coburn, if no native is considered eligible? — may be afforded similar facilities, and, no doubt, the results would be infinitely valuable and instructive.

A rather amusing story has come to light in the pages of the "Optician and Scientific Instrument Maker," which vouches for the following as true. It appears that on the outbreak of war, it was found difficult to get the fine, black finish so necessary to some scientific instruments, among which, of course, photographic lenses are included. The splendid German finish of the Zeiss school was shown to British makers as an object-lesson. Inquiries were made, which resulted in the discovery that the Zeiss blacks were made by a British firm! Evidently, in the hurry and rush at the

beginning of the war, faulty or careless methods of applying the black to the metals were the causes of the failures. It has also been discovered that a British firm, before peace was broken, wrote to the Zeiss firm asking for particulars of the composition of its black. A reply came declining to divulge secrets, but a sample was enclosed upon which, under the Zeiss label, was found the name of the British manufacturer.

The Royal Photographic Society is our very oldest photographic institution of any importance. It is the Royal Academy of the photographic world, and fosters every branch of our many sided craft. One of its traditions is the encouragement of good and sound photography, whether it be in the technical or pictorial section, and one of its rules is that a newly elected member shall present it with one of his own photographs, which is expected to be as characteristic of his general work as possible. We are wondering what picture Mr. French is going to send!

Last week the news came to us from Mr. Mackintosh, the secretary of the R. P. S., that his society had elected the editor of PHOTO-ERA to be a Fellow. Perhaps, for American readers, it is well to point out that a mere "Member" needs only to be a photographer, whereas a "Fellow" must possess decidedly more than average photographic ability.

Mr. Mackintosh tells us that the Society is pleased to welcome as a Fellow any one who has distinguished himself as Mr. French has done, and who has rendered such services to photography. We must just say, in parenthesis, that PHOTO-ERA has some warm admirers in our country, who consider it a journal of distinction which gives us the best, and is, at the present time, without a rival over here. Mr. Mackintosh, to whom we apologize for this interruption, continues: "Our members always feel a satisfaction when they are joined by an American, knowing that such relationships and community of interest help to keep those who have so much akin from getting estranged. We were glad to have so many exhibits from the States, this year, and hope to have more next."

Mr. John H. Gear is the new President of the R. P. S. He has recently given his presidential address, on the subject of "Photography and the War" — hardly an original theme just now — but Mr. Gear knows a good bit about aerial photography, and was able to relate some startling as well as absorbingly interesting facts.

The Camera Club has been lucky to engage Mr. Pollen as a lecturer, and we were unlucky in not being able to attend his lecture. He is one of the greatest naval experts, and apparently a photographer as well, for he was able to illustrate his subject with his own photographs. His well-reasoned articles on naval subjects are widely read every week in *Land and Water*.

We were in at the Camera Club, a few days before his lecture, to see what exhibition was on. Would it be photography or paint? On entering, we found Mr. Mortimer, who, pointing to the walls, said, "Have you come to see these magnificent bromoids?" And for the moment we were taken in, and thought what gigantic strides photography had taken. One has to confess that the London light was not at its best, and there was but a poor illumination of electric light at the time. The exhibits were really paint, and the work of Mr. H. John Pearson. His pictures are mostly of children, and are treated very freely and unconventionally; the result is that they impress one as being full of life and movement. They all seem of the Shepperson type, and make photographers sigh with envy. This feeling is a little assuaged when one knows that the little models are mostly exceptional children, many of them being on the stage.

CARINE AND WILL CADBY.

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# March, 1917

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**To Contributors:** Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

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KATHERINE BINGHAM, Editor, Monthly Competitions

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BEAUTY — SOUL — BODY  
KAZANJIAN STUDIO, INC.





# PHOTO - ERA

The American Journal of Photography

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Vol. XXXVIII


MARCH, 1917

No. 3

## Getting Meaning in a Picture

In Three Parts — Part I

C. H. CLAUDY

OOSE terminology is the bane of all arts and some branches of study ineptly termed "scientific." For instance: "The charming effect of airy lightness obtained by various nuances of color-rendition in the several planes of the middle distance gives a feeling of reality to this picture, and shows a grasp of individuality seldom seen in the frigid tonality of a monochrome."

This is a fair mouthful of a sentence, written actually by a newspaper art-critic about a photograph hung in an exhibition. Undoubtedly, the critic had an idea when he wrote it, but most readers will scarcely admit that he expressed it. His terminology was too loose. If he had defined effect, airy lightness, nuance, color-rendition, several planes, feeling of reality, grasp of individuality and frigid tonality, one could probably understand at what he was aiming.

It is a looseness of intention which leads to the use of a loose terminology. The man who knows exactly what he means can usually find words to express that exact meaning. And it is the same looseness of intention which is responsible for so many attempts at pictorial photography in which the picture is made first and invested with a meaning afterward.

From the art-standpoint, this is a pitiful subterfuge. The present scribe holds no brief in the name of Art, and makes no claims to possessing an authoritative critical faculty to apply to the expressions of the artistic sense of others of his kind. But in spite of the fact that so many artists claim — comfortably enough — that they work for only the appreciation of other artists, the general public has its rights in the pictures it is asked to admire or reject. Consequently, the individual, whether he thinks in silence or commits his thoughts to paper, has also the right of criticism, given by the artist when he invites in-

spection of his work; always providing that criticism is made against a background of comprehension, at least of the mark at which the particular artistic expression under consideration is aimed.

The skilful technician with plate and paper, lens and tripod, developer and darkroom-chemicals, wanders afield looking for new worlds to conquer. Upon the spur of the moment — and because its gorgeous colors command his admiration — he sets up his camera and "snaps" the sunset which has been painted by glowing brush of Helios against the canvas woven by Boreas. The result, printed, perhaps, in a dark-red gum, with that distorted glimmering of artistic truth which dictates that simulation is better than stimulation, is called "Shades of Evening," or "The Dying Day," or "The Coming of Night." It is sent forth to command such admiration as it may win from those who, seeing clouds, a spot of highlight in an umber of shadow, a vague landscape and an unusual tone, stop, look and criticize with an inane, "How very unusual — how deftly he has caught the meaning of the evening-hour — see with what beauty he has attacked the coarsened outline of those objects blurred in the half-light that lies twixt twilight and the dark!"

It would be pathetic, if it were not bathetic. To such a picture there can be no more serious intention to bring forth meaning than there is a desire to express poetry in motion when a half-grown kitten gambols after the elusive thread that some childish hand has tied to its tail. Granted, freely, that the kitten is attractive, irresistible, graceful, beautiful — that we stop and smile at its antics, and enjoy its sinuous movement, its untutored dance of joy across the room. So may the sunset-photograph be beautiful, attractive, lovely, with the untutored loveliness of a brush which knows nothing of line or plane or perspective.

But we do not rave over the kitten as a dancer, nor do we give it credit for deep thought, skilful interpretation of a mood or feeling, nor do we label its dance "Poetry of the Pagan," or "Woodland Elf," or "Distressed Fairy," as an interpretative dancer may title her efforts to express in pose and motion an emotion or a state of mind. We call it a pretty kitten having a good time, and let it go at that.

Why, then, do we take our haphazard sunset, beautiful though it may be, and call it "The Coming of Night"? Why do we try to read into it something that does not there exist? Why do we tolerate in others a bald deception not the less to be condemned that it is difficult to prove? Why do we not call it "Snapshot of a Sunset," and let it go at that? Why do we call it *anything* — why not let it go for what it is, a mere bit of beauty, captured by scientific magic, as perfect in its way as the golden-throated melody of a nightingale, the musical tinkle of the brook, or the tender coo of a mating dove, and as without meaning, pretense or intent?

Each may answer the question for himself. The present scribe has no doubt in his own mind of the answer he would make were he called upon to express publicly an opinion long held privately. In the opinion of one man, then, we try to read into our casual photographs a meaning they do not possess, because we suffer from a bad combination of mental laziness and lack of artistic ability!

That is not a pretty answer; but for many, at least, it is a true one. Lack of artistic ability is common — possession of a camera, an appreciation of the beautiful in nature, and ability to expose, develop and print well, do not make an artist out of plain John Smith. Knowing music from noise, enjoying it when it is well played and paying three dollars for a seat at the Boston Symphony does not make a musician out of the clerk at the ribbon-counter. And as for mental laziness, it takes no more than an intelligently managed walk through an art-gallery to know that "Art is long and time is fleeting" is more than a pretty line in a poem — it is a fact. It is too much work to learn to be an artist. It is too great a strain to spend our spare time poring over books and pictures, trying to find definite answers to our vague questionings as to why our sunset is not art! We want to be artists ready-made. We want to go out with our cameras and our tripods, our note-books and our souls in tune with the beauty of the day, and have the one react upon the other without mental effort.

"Have we not a perfect technique of drawing at our command?" we may argue. "Have we not the ability to render perfectly line and tone,

shadow and highlight, substance and mass, perspective and 'stereoscopic feeling'? Why, then, shall we spend our time studying to put a meaning into our photographs, when we can make them beautiful first, and find out afterward what message they seem to convey?"

Of course, we don't argue that way; but many of us would, if we told the truth.

Let it not be understood for one moment that any contention is made that *all* who make pictures by photography do so in this haphazard, hit-or-miss way. There are many real artists who use the camera as a means of expression, artists no less that lens and plate take the place of pallet and brush, artists whose deep study, genius of expression and love of truth are, perhaps, greater rather than less, that they have chosen to emancipate themselves from the drudgery of the mere mechanics of drawing. That they desire to possess greater freedom of artistic expression, given by that instrument which leaves all the attention free to put on the life in the picture, unhampered by consideration of its physical formation, is neither unnatural nor uncommon.

For such as these, there can be but wholesome respect, the homage paid to those who struggle to express the feeling that is in them, who try to do something with their tools besides mere aimless gambols which, like the kitten's, while they may be pretty, have no meaning. Nor must it be thought that any damnation of faint praise is given him who but strives to fix the beauty of nature to a glue-and-pigmented piece of paper. To preserve beauty is to add to the joy of life, and whether our means be the pressing of a beautiful leaf-tracery of fern in the family Bible, the collecting of varnished shells or the preservation of a sunset in red monochrome, the effort, particularly if successful, is worthy of all praise — but only when it stands for what it is; when it is foisted upon us as masquerading under another name, pretending to add thought to the effort of time and patience, to be the expression of a feeling, emotion or idea, then, and only then, does it cease to demand our respect.

It is not, then, for the artist and his camera, for the beauty lover and his lens and plate, that we dip our pen in acid and write hypocrite after his name. It is for him who would imitate, but cannot, for her who mistakes the jargon of art and a smoky smudge for the expression of an emotion probably caused by a weak diet of toast and tea and not enough red meat, for all who fake a meaning by a catchy title, who read into their picture a thought they did not put there themselves, but which they hope others will think they so intended. Meaning in a picture, like a great lesson in a sermon, is not to be put there with a



WANDERING CLOUDS OF SLEEPY CREAM

H. C. MANN

title, nor even with perfect technique. It was not the *words* which Joseph Jefferson spoke that brought tears to the eyes of those who loved him as Rip Van Winkle — it was the thought, the meaning, the love behind the words. It is not that a woman smiles at you from canvas that we marvel at the Mona Lisa — it is something the artist put there that no gibes can take away. The words which Shakespeare used are common property to us all, but we do not write as the master wrote. Meaning in a picture must come from *within*, and *before* the picture is made — not haphazard, and from good luck after it is finished. To express a thought on canvas, paper, parchment, cloth or glass — it is all one — so that others,

looking, can get the thought, is to have done real work, triumphed a real victory, achieved a real goal. To imitate by adding to the haphazard picture of mere beauty a meaning, either by title, by implication or by description, is but a base and fraudulent imitation, of which an *artist* would never be guilty. A high standard of art-ethics should be the aim of every worker. Few artists can tell others how they work, what springs move them to get real results. But he who is no artist can tell in what way he strives — hence the two following papers in this series are concerned with ways and means by which one may at least attempt what all real artists do naturally — get a true and beautiful meaning into their pictures.





INTERESTED

A. E. CHURCHILL

## Just Kids!

A. E. CHURCHILL

**A**N old adage runs, "All the world loves a lover." To this I would add, "All the world loves a child."

What person is there with an ounce of red blood in his veins who is not drawn irresistibly by the trustful smile of childhood?

Whether from manor or hovel, they are always "just kids." The environment of affluence may, at times, make them autocratic or peevish, but when their true nature asserts itself, they are the same the world over. Black or white, Chinese or Choctaw, they touch a chord within our hearts that takes us back to the happy days when we were children, too. Unless altered by abuse or cruelty, they take every one at his face-value. Rich or poor, in rags or satins, it makes no difference to them.

If to the simple passer-by they appeal with so much charm, how much more must they appeal to the man with the camera, to whom is given the added pleasure and privilege to record, with

lens and sensitive-plate, the infinite variety of their interesting and amusing antics.

It is the humble purpose of the writer to relate his experiences in an effort to portray child-life, not so much among the pampered offspring of the well-to-do, as among the children of those who struggle and toil against poverty, whose brief periods of rest between work and bedtime are brightened by the prattle of infant-voices.

It is a well-known fact that the people of the lower classes, as a rule, are blessed or otherwise with large families of children, and it is among the densely populated districts of a big city that we may find lots of material for the camera. Here, as perhaps nowhere else, child-life is found at its best, and in numbers to satisfy the most ardent lover of kids. Left through necessity to shift largely for themselves and to seek their own means of enjoyment, they reveal themselves as just plain kids to the sympathetic observer.

Except during the hours of school-time, they swarm the streets, bent on every known form of



CHILDREN OF THE LOWER EAST SIDE, NEW YORK

A. E. CHURCHILL





THE HOKEY-POKEY MAN

A. E. CHURCHILL

activity and deviltry, seizing upon almost any object that may be handy, from which to fashion a plaything which will give a moment's pleasure.

Not all of the children of the poor, however, are allowed to spend their time purely in search of pleasure. In many cases, the older children are given the care of infant brothers and sisters, and they may be seen trundling in their arms babes scarce from the maternal breast, while their mothers are probably bending with aching backs over the washtub. These little mothers seat themselves in lines and knots about the sidewalks, chattering away merrily as they tenderly rock their infant charges to restless sleep.

Many interesting problems are encountered by the photographer who desires to portray kids just as they are, engaged in the pure joy of living, and not yet touched by the hand of care or responsibility. The first that presents itself is the choice of suitable apparatus that will not attract the attention of the children. One will instantly realize, on attempting to photograph them, that their first and foremost passion is curiosity. The mere sight of a camera, which they seem, at a glance, to recognize instinctively as such, fills them with the keenest desire to see what is inside of it. They will immediately flock around one like so many pigeons around a feast of bread-crumbs, in their efforts to satisfy their curiosity.

It is, therefore, advisable to select the least

conspicuous camera possible. Experience in this direction would suggest a small one of the folding-type, in size,  $3\frac{1}{4} \times 4\frac{1}{4}$  or  $4 \times 5$ . There are many metal folding-cameras for sale that are eminently suitable for this class of snapshot-work.

I might say, in passing, that the reflecting type of camera has many advantages, although I do not regard it as an ideal instrument for this purpose, as it is usually more or less bulky, and invariably attracts undue attention — a thing essentially to be avoided in photographing children.

A small camera equipped with as large a direct-vision finder as possible, I consider the most practicable. By a large finder I mean one that is considerably larger than the kind usually supplied with small cameras, for it will be found to be superior to the smaller size for the rapid centering of moving figures which are constantly encountered. I can strongly recommend the use of a finder that is usually supplied for  $8 \times 10$  cameras. This may be readily carried in the vest-pocket, when not in use, and may be attached instantly to the top of the camera by means of a small tongue of spring-brass riveted to its base-plate. The shutter may be one of several reliable types, giving speeds of  $\frac{1}{10}$ ,  $\frac{1}{25}$ ,  $\frac{1}{50}$  and  $\frac{1}{100}$  of a second with time and bulb exposures.

With reference to lens-equipment — an objective having a maximum aperture of F/6.3 will be found quite fast enough for the purpose of



obtaining pictures of children in action. Objectives not exceeding 7 or  $7\frac{1}{2}$  inches in focal lengths may be used with success. Ample depth of focus may be obtained for groups and single figures at working apertures of F/6.3 to F/11 and, occasionally, at F/16.

With little practice, sharp negatives may be secured at speeds from  $\frac{1}{10}$  to  $\frac{1}{75}$  of a second, depending, of course, upon prevailing conditions of light and movement when making the exposure.

If care is exercised in watching the action of children, periods of comparative rest can be frequently detected, so that it will not be necessary

fairly rapid in their movements, and to obtain figures of pleasing size one must work as close as possible to the subject. Therefore, it becomes apparent that, at times, we shall be required to stop motion, although not what might be called rapid motion. The nearness of the camera to the subject causes any movement to be greatly increased in relation to the plate. To be on the safe side of success requires a combination of a rapid plate, a fairly fast lens and moderate shutter-speeds. As a matter of fact, my most successful negatives were made at shutter-speeds varying from  $\frac{1}{25}$  to  $\frac{1}{10}$  of a second.



FORTUNES TOLD

A. E. CHURCHILL

to employ high shutter-speeds. In a word — be alert, and you will catch your subjects unawares.

A method of measuring and gauging distance which I have found simple and reliable, is to calculate it by pacing. A long stride, or the step of an average man, will be found to approximate three feet, or one yard. Try this method in connection with inanimate objects at different distances while you are out walking, and it will soon become an easy task to estimate accurately such distances as 6, 9, 12 and 15 feet — those used most frequently.

Regarding the matter of sensitized material to be employed, it is obvious that rapid plates or film must be used. Children at play, or otherwise engaged in doing something, are usually

In my work I have found the Seed 30 and the Wellington Extreme plates highly satisfactory, although the extremely fast plates by all makers will be found equally satisfactory — if obtainable.

As the charm of child-photographs lies in obtaining them without the knowledge of the subjects, it becomes necessary to study the peculiarities of children. Their prevailing characteristic, as I have previously pointed out, is curiosity. Indeed, the same might be said also of grown-ups. This propensity, therefore, must be guarded against, or the resulting photographs will prove to be glowing examples of gaping countenances intensely interested in the camera, and with poses suggesting those of a cigar-store Indian. The camera, consequently, should be



LOUISE STERLING

MOORE

carefully set for any possible contingency, as nearly as this can be foreseen, and then it should be concealed from view by being held behind the camerist until an interesting group presents itself. Then the camera may be brought quickly into action, adjusted, if necessary, for distance of group, and the exposure made, while sighting the image in the finder in much the same manner as a marksman would sight a gun.

A little time spent in studying the habits of kids will enable one to select many charming poses which they unconsciously assume while playing or when quietly watching their playmates.

Concerning the subsequent development and

printing from the negatives, there is, perhaps, little need to describe any particular method, as almost every camerist has one of his own. For the benefit of those who may be interested to know, I will say that, from my experience with almost every known developing-agent, our old friend pyro has given me the most satisfactory printing-qualities. Its latitude in manipulation is greatly in its favor. It is also cheap and obtainable.

In closing these notes of the many pleasant moments I have spent with my camera among happy, care-free kids, I indulge the hope that other devotees of the camera may engage in this interesting and profitable branch of photography.



# Burson — Press-Photographer

MICHAEL GROSS



HE fire must have started early that morning; but Burson first noticed it when he came out on the porch after breakfast. By that time the flames were shooting skyward through the roof of the little cottage, and, though it was quite a distance away, Burson could make out groups of panic-stricken people on the roof and at the windows. He shuddered as the thought came to him that their peril was, indeed, great; for the house stood isolated in a little clearing, blocks away from any other dwelling.

But this thought was quickly crowded out by the realization that here was a glorious opportunity for a newspaper-scoop. Since receiving a ten-dollar cheque for just one print from *The Daily News*, Burson had been a regular bloodhound on the trail of the elusive news-photograph, and this was the first big thing that had presented itself. He rushed into the house, loaded up the dozen extra-rapid plates he had intended to use at the fireman's parade the following Saturday, grabbed his camera and hurried out.

He arrived at the scene of the fire a few minutes later and immediately began to push his way through the dense crowd that had already gathered. Burson's chest swelled with pride as he heard several bystanders shout, "Gangway, there, gangway! This camera-man wants to get through to take some pictures." "Class will tell," he muttered, "they can see I know my business even though I'm not on a paper as yet."

But just when he had managed to get close enough to set up his camera, he found his path blocked by a burly individual in white overalls, who evidently was not as good a judge of "class" as the crowd had been. "Hey there!" he yelled, "what do you think you're doin'?"

Burson, with the *sang-froid* that he knew was typical of a press-photographer, answered flipantly, "Oh, I just thought I'd try a few shots at that fire."

"Oh, did you?" the other answered; "well, if there's any photographing to be done 'round here, we'll do it. Savvy?"

"Evidently the rough-neck assistant of some local camera-man," was Burson's thought, "who has instructions to prevent any one else from getting a picture."

Burson hesitated a moment and then, with a swiftness that convinced him he was preordained for a news-photographer, he thought of a way

out of the dilemma. As oil is said to still turbulent waters, so did the two-dollar bill Burson pushed into the assistant's hand soothe that worthy's ruffled feelings. Not only did the money buy the assistant from his first master, but he served Burson so well that soon a lane was made in the crowd, through which he had an unobstructed view of the fire. The flames had died down, but dense clouds of smoke poured from every window. Burson was about to take his first picture, when he noticed a woman and child appear at a top-floor window. Feeling sure that a rescue would be attempted, he decided to save the plate. Sure enough; a ladder suddenly shot up from the midst of the crowd and soon several firemen began to climb it. A stout, red-faced man, evidently the captain of the fire-brigade, although he did not wear a uniform, shouted hoarse, indistinguishable commands through an immense megaphone. Amidst the cheers of the onlookers, the gallant rescuers succeeded in bringing down the poor victims, and Burson devoted four plates to show how they did it. Then he took a speed-picture of a half-ezared man who leaped from the roof before the firemen could reach him with a ladder, and used up three more plates to show the collapse of the front of the building.

This made eight pictures taken right on the scene, and Burson felt it might be a good idea to get on a height, a little distance away, and take a few plates showing the smoking ruins, the crowds and the fire-fighting apparatus. He edged through the mob and ran to the house nearest the fire. It happened to be one owned by an old Jew who ran a pawnshop in the store. Burson rushed in all excited, and tried to make his way to the rear staircase, which he concluded led to the roof; but the pawnbroker barred his passage. "Vat iss de big rush for?" he asked.

"The fire," Burson gasped, "I want to go up on your roof to get some pictures for the newspapers."

But the words failed to make an impression. "Vat? you gonner stample"—he evidently meant "trample"—"all ofer mine roof? No; you shall not do it."

Burson paused for a moment, then, for the second time within an hour, the "long green" stood him in good stead. Once more a two-dollar bill proved a potent persuader, and Burson rushed past and flew up the steps.

He got up on the roof in time to get four plates of the last wall caving in, with streams of water



being poured on it from all directions. Having taken his twelve plates, Burson folded up his camera and ran all the way home. Speed, he knew, was the prime essential in making a success of newspaper-work, and ten minutes after he had entered his house, he had darkened the kitchen, lit his ruby lamp and had the first plate in the developer. After each negative, he paused a moment to bless the man who had prepared the emulsion on it. He had bought the plates as extra-rapid, and they certainly lived up to their name. Even the negative of the man jumping from the roof, taken at the quickest speed the shutter was capable of, was as clean-cut as a cameo. True, in appearance, the man's body was more like a sack of flour, with arms and legs stuck in, but Burson reflected, with a smile, that when a half-baked man jumps off a burning roof he can't very well keep his head up and show his features just to please the photographer.

Determined to get the finished pictures off that night, Burson gave each negative a ten-minute alcohol-bath before setting it up to dry. In a half hour they were ready to print. He made twelve good glossy prints and, after they were washed, squeegeed them onto a ferrotype-plate. Then, with a silent prayer that they would n't stick, he laid the plate on the steam radiator. Fortune favored him, for in a little while the heat had dried the prints and they all popped off — bone-dry.

The biggest part of the work was now done, and Burson stopped to get a bite to eat. Since breakfast he had not touched a morsel of food, the excitement causing him to forget all about luncheon. But now he felt that he could spare the time to satisfy his hunger. "If I want to be a real press-photographer," he told his mother, when she chided him for neglecting his meals, "I've got to learn to go without eating — and sleeping, too, if I have to."

After a hasty meal, Burson got back to work. He trimmed the prints, then sat down and wrote a letter giving the facts about the fire — when and how it had started; a few words about the heroic rescues that were made, and at what time the fire had been extinguished. After this, he slipped the letter and the photographs into a corrugated photo-mailer, went down to the post-office and sent the package off first-class, special delivery, to *The Clarion*, the town's best evening-paper. "That'll reach them early to-morrow morning," Burson explained to the admiring members of the family that gathered around him on his return, "and the pictures will go into the first edition of the paper. Did you notice the way I marked each one 'PHOTOGRAPH BY BURSON'? Those words will be printed under the repro-

duction. That's the way to build up a reputation."

"How much do you think you'll get for them?" his mother asked.

"Well, I judge about five dollars each," Burson answered, "maybe more — but hardly less. Of course, it cost me some money to get the pictures; but even at five dollars each, I'll make about fifty dollars clear. Pretty good, for one day's work, eh?"

Everybody agreed that it was — if he got it.

Burson had no idea that a day could last for as many years as did the one following the sending off of the pictures. The first issue of *The Clarion* did not come out before six o'clock. At five, the letter-man called, and Burson, hardly daring to hope that there was anything for him, rushed out. To his astonishment, the carrier handed him a letter, the envelope of which showed that it came from *The Clarion*. "Here's the cheque for those photos already!" Burson exclaimed, as he rushed up to his room; "won't this just knock the folks off their feet. I knew they did n't believe me when I said that I made fifty dollars yesterday. Well, they'll have to believe when they see this cheque."

He tore open the envelope and drew out the sheet it contained. Then he peered in for the cheque. But the envelope held nothing else. "I guess it must be clipped to the letter," Burson thought, as he started to spread out the sheet. He guessed wrong, however. There was no cheque, and the letter told him why there was n't. It ran:

"We are returning under separate cover your twelve pictures of the cottage the Vitascope Motion-Picture Company burned down yesterday in filming their latest feature-picture — 'Through Fire and Flame.' We have received enough 'stills' of this occurrence direct from the Vitascope people to serve our purpose.

"We might mention that it will very rarely pay you to photograph exterior scenes of 'movies,' as the company filming them usually provides us with photographs gratis, in return for the publicity the film receives through the picture being published in our paper."

Burson finished the letter in a daze. Then he cast his mind back over the incidents at the fire. "Golly, what a chump I've been," he muttered savagely; "I might have known that fellow in the overalls was a property-man and the old man with the megaphone was a director — not a fire-chief. No wonder the fellow jumping off the roof looked like a stuffed bag," he went on bitterly, "that's all he was — a stuffed bag. Well, it cost me almost five dollars; but I'm still five dollars ahead. I'll show them some real stuff next time."

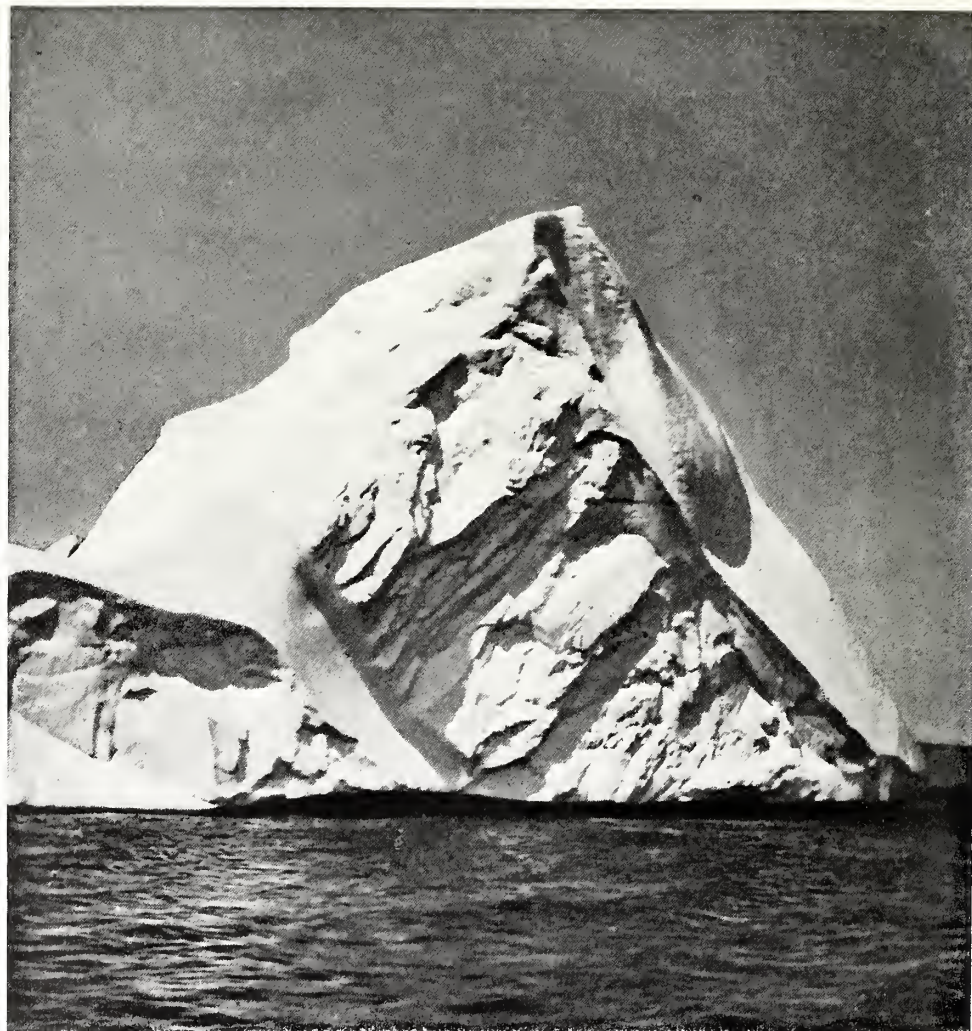


THE MATTERHORN

*Courtesy National Geographic Magazine*

DONALD M. LEISH





A TERROR OF THE DEEP

WILLIAM H. PIERCE

## Instantaneous Photography with Wet-Plates

WILLIAM HERBERT ROLLINS

**T**HE statement is often made that instantaneous photography was not possible until the advent of the gelatine-plate. To a few very skilful photographers who practised the art before Dr. Maddox gave us the gelatine-plate, in 1871, we are indebted for some very superior instantaneous photographs, some of them made while the camera as well as the object was moving. The three photographs I have chosen for illustration were made by a Bostonian, William H. Pierce, Esquire, who used the wet-collodion process, invented by Le Gray. The

collodion was the usual iodine-bromine, containing more of the latter than usual to get better contrasts. The nitrate of silver bath had forty-five grains of the salt to an ounce. The developer was iron. The water of the vessel could not be used. The shore-water was filtered through moss, which gave it the color of brandy. Mr. Pierce was the photographer of an expedition to the Arctic fitted out by Mr. William Bradford, Esquire, a distinguished American artist. The illustrations — shown here — were taken on this expedition, with a Voigtlander lens and home-made shutter. They speak for themselves.





LYING IN WAIT

WILLIAM H. PIERCE

# The Complete Outfit

L. D. ROWELL



It has been said that no true camerist is ever seen twice with the same camera. Doubtless, the grain of truth in this may be found in the implication that the confirmed amateur is ever seeking a better camera — something that will turn his failures into successes, and enable him to do those things which he is always longing to do. In the evolution of the true amateur-photographer — the one to whom photography is a life pastime and not a passing fad — there is a stage when the camera, and not pictures, is the subject of his dreams, and it is to this stage of his development that the adage quoted applies.

But this stage is not the final one. Gradually the conviction is forced upon him that, after all, the camera is but one of the means to an end, and possibly one of the least important; for a photographer with true artistic feeling will produce pictures with a light-tight box and a pin-hole, whereas no equipment, no matter how perfect, will enable the barbarous "snap-shooter" to obtain real pictures, except by accident. Once this has been fully realized, the amateur will see that it is better to select an outfit suited to the work he desires to do, and stick to it, mastering it technically, after which it will become his inseparable companion.

"Select an outfit." Ay! There's the rub! For, in the selection of an outfit, must one not go through that transition stage which the selection of a permanent outfit is designed to avert? Indeed, such has been the author's experience; but after years of dabbling in photography, without producing anything worth while, he has emerged with an equipment so satisfactory that he feels he has now reached that next stage in the amateur's development, where he can devote his energies to mastering the technique of his instrument, with full confidence in its capabilities. It is with the hope that his experience may be helpful to others, that this article is written.

The camera itself is naturally the object of primary interest; but in order to understand the reasons that govern its selection, it is essential that the general plan of the entire equipment be appreciated. This equipment includes a projection-lantern and an enlarging-camera, so that negatives having sufficient interest to warrant it may be worked up either in the form of lantern-slides or enlargements. Hence the smallest practical size of negative will naturally be chosen.

After an experience with six different sizes, the writer believes the  $2\frac{1}{4} \times 3\frac{1}{4}$  to possess certain advantages not to be found in any other size. In common with many serious workers, he disapproves the  $2\frac{1}{2} \times 4\frac{1}{4}$  and  $3\frac{1}{4} \times 5\frac{1}{2}$  sizes, for reasons that are sufficiently obvious to those who have tried to compose pictures within those dimensions. If the pictures are to be enlarged, there is no advantage in the  $4 \times 5$  and  $5 \times 7$ , and there is considerable disadvantage due to the fact that plates are heavy and inconvenient, sometimes, whereas films are expensive, and do not lie flat enough to permit the use of the fastest lenses.

Of the smaller sizes,  $2\frac{1}{4} \times 3\frac{1}{4}$  is the smallest from which satisfactory contact-prints can be made. It has the additional advantage of being the only correct size for making lantern-slides by contact-printing;  $3\frac{1}{4} \times 4\frac{1}{4}$  is usually regarded as lantern-size, but it is not suitable for contact-work, for the reason that a portion of the negative is lost in the necessary margins, whereas vertical pictures must be cut down a third or more; that is, not over  $2\frac{3}{4}$  inches of the  $4\frac{1}{4}$ -inch negative can be used, if the picture was taken with the long side of the plate vertical. Another disadvantage of this size is that the condensor of the standard projection-lantern is not large enough to cover it when used for enlarging.

The vest-pocket size has much to commend it, and is deservedly popular. It does not give, however, wholly satisfactory contact-prints, and it is too small for contact lantern-slides. In both these respects, the  $2\frac{1}{4} \times 3\frac{1}{4}$  is superior. The smaller size, however, affords very satisfactory enlargements, and with convenient means for enlarging, the fact that the contact-prints are too small is not of much moment.

If a lens as fast as F/4.5 is used, the smaller sizes have two distinct advantages: the shorter the focal length of the lens, the better is the depth of focus; also, the smaller film lies more nearly flat, and gives a truer recording-plane. In both these respects, there is some advantage in the vest-pocket size; on the other hand, the  $2\frac{1}{4} \times 3\frac{1}{4}$  is probably about the largest size which can use films and an F/4.5 lens with the best results. These advantages hold even when the camera is equipped with a 6-inch lens, which is usually listed for a  $4 \times 5$  plate.

The argument in favor of the size that has been chosen can be summed up, therefore, as shown in the following four paragraphs:





AMONG THE OAKS

L. D. ROWELL

(1) It is the smallest size that yields satisfactory contact-prints.

(2) It is the correct size for lantern-slides by contact.

(3) It is the largest size that can be covered by the condensor of the standard projection-lantern.

(4) It is the largest size in which films lie flat enough for an F/4.5 lens, and in which the depth of focus of such a lens is wholly satisfactory.

The size having been decided, the type of camera is next in the order of choice. The writer's experience has led to the conviction that for most work the rule so often stated by the late Dr. John Nicol, beloved teacher of amateurs, is of first importance; viz., "The focal length of the lens should be not less than twice the long side of the plate." This calls for a  $6\frac{1}{2}$ -inch lens with the size of plate chosen. A little consideration will show that the choice of camera is thus pretty limited, as this at once rules out the film-cameras. There are, however, some excellent foreign plate-cameras of these dimensions, which, when equipped with film-pack adapters, make splendid little instruments.

It was the writer's plan, in the selection of this camera, to provide for as wide a range of

work as possible; in short, to get the best all-around equipment to be had; and the choice represents the result of several years' experience and observation. The little plate-cameras mentioned have one drawback; viz., when equipped with an F/4.5 lens they must be focused carefully for all close work, which is a serious handicap when photographing children at play, animals, etc. For this work the reflecting-camera is supreme, and for landscape- and portrait-photography it also has decided advantages. With such a camera, plates, film-packs or roll-film may be used; roll-film having the preference for general use, because of the convenience of handling during development. The camera selected, therefore, was a  $2\frac{1}{4} \times 3\frac{1}{4}$  reflecting-camera with sufficient focal-capacity to accommodate the  $6\frac{1}{2}$ -inch lens with which it was equipped.

This camera has been a constant source of pleasure, being, as it should be, a thing of beauty. The little negatives give beautiful prints when printed on glossy paper, which, to the writer's taste, is the best paper for such small prints. Lantern-slides made by contact have that gradation and "snap" which is the delight of the confirmed slide-maker, whereas enlargements up to  $8 \times 10$  are as satisfactory as contact-prints.



A point not often appreciated in connection with lenses of long focus, as compared with the usual equipment, is that they really give much of the advantage of a larger camera. Thus, if the  $6\frac{1}{2}$ -inch lens under discussion were used on a  $4 \times 5$  camera, for which size it is rated, the resulting picture would include too much in a large number of cases, and would require trimming down; so that  $2\frac{1}{4} \times 3\frac{1}{4}$  includes about all that would usually be left after trimming the larger print. In short, the objects in the smaller negative are exactly the same size as they would be on a  $4 \times 5$  taken from the same spot with the usual  $6\frac{1}{2}$ -inch lens equipment, the only difference in the negatives being that the  $4 \times 5$  has included more of the view. This is more often a detriment than an advantage, since in a large proportion of cases the extra material merely detracts from the picture. If any one who doubts this will trim down to  $2\frac{1}{4} \times 3\frac{1}{4}$  a lot of good  $4 \times 5$  or  $3\frac{1}{4} \times 5\frac{1}{2}$  pictures, taken with the usual short-focus lens, he will be convinced of this statement.

Again summing up, the advantages in the type of camera and lens chosen, we have:

(1) The focal length of lens is such as to give a pleasing perspective, and exclude all of the subject except the part which holds the interest.

(2) The picture can be composed full-size, instead of in a space half the size of a postage-stamp. This enables the worker to make full use of the advantage cited in (1).

(3) "Close up" pictures can be placed and focused quickly and accurately — a necessity for child- and animal-studies.

(4) Plates or films can be used at will, and the change can be made in an instant. It is the only type of camera in which ground-glass focusing can be done when using roll-film.

The little negatives produced by this camera make charming prints for mounting in an album; but one's best negatives demand something better; and any equipment would be deficient that did not provide for enlarging such negatives as appear worth it. In selecting an enlarging-outfit, one is at once struck by the advantage previously cited; viz., the negatives are fully covered by the  $4\frac{1}{2}$ -inch condensor of the standard projection-lantern. This advantage is two-fold: (1) A condensor of this size is cheap and obtained readily, if one wishes to construct his own enlarger. (2) A standard lantern fulfils the functions of slide-projection and enlarging equally well. This latter appeals particularly to the amateur who has tasted the pleasures of slide-making. This is, indeed, one of the most fascinating of all branches of photography, and the entire equipment under discussion has been selected with this idea in mind.

In the choice of a projection-lantern, the focal length of the lens, the illuminant and the style of lantern must be decided. Assuming that the lantern is primarily for home-use, a ten- or twelve-inch lens will be found best, as it gives a small, sharp, well-illuminated picture. Located ten feet from the screen, a ten-inch lens gives an image  $22 \times 33$  inches from a slide with a  $2 \times 3$ -inch opening. Such a lens has the added advantage of being satisfactory for class-rooms or small halls as well, which is not the case with lenses of shorter focus.

For the illuminant, the concentrated-filament, spherical-incandescent lamps, made especially for projection-work, are ideal. For home-use a 250-watt lamp is ample, where a 400-watt lamp is very satisfactory for churches or halls where an image not larger than  $5 \times 7$  feet is required, the lantern in this case being placed about 25 feet from the screen.

In using the lantern for enlarging, one will naturally wish to use the high-grade camera-lens, rather than the one furnished with the lantern; but this is not a safe thing to do. The rays from a 250-watt lamp, when concentrated on the lens by the condensor, are hot enough to burn the hand, and with an arc-lamp it is still hotter. The author's first experience with this consisted in burning a hole through the blades of a between-the-lens shutter, and he has one lens in which a cemented element has slightly shifted, due to the softening of the balsam-cement. A cooling-cell on the lantern will obviate this difficulty, and the camera-lens can be used without fear of injury. Such a cell is almost a necessity when enlarging from films, especially where a powerful light source is used.

As indicated above, the lantern which was selected for this outfit has a 10-inch lens, a water-cooling cell and is equipped with a 250-watt, silvered-back, nitrogen-filled projection-lamp. The  $8 \times 10$  enlargements on Azo, from  $2\frac{1}{4} \times 3\frac{1}{4}$  negatives, require exposures of from 30 seconds to one minute. Sharp focus is obtained by focusing with lens wide open and stopping down for the exposure. There is nothing gained by stopping down smaller than F/8. The increased depth of focus resulting from a smaller stop brings into focus any defects in the nearer condensor, as well as air-bubbles in the cooling-cell; hence is to be avoided.

One of the most interesting of all photographic fields for the serious amateur is that of copying, slide-making by reduction, etc. There is an endless variety of this process work which can be done with the proper equipment. The  $6\frac{1}{2}$ -inch camera lens is a very satisfactory lens for this service, the lens-cap answering the purpose of

shutter, as exposures are from several seconds' to several minutes' duration.

So far as the writer knows, there is no camera on the market for this kind of work that does not need some modifications or additions to adapt it to the amateur's needs. An 8 x 10 copying- enlarging- and reducing-camera completes the equipment under discussion, and is fairly satisfactory. It is fitted with a back for lantern-slide work, having a 3 x 4-inch opening. A ground-glass frame, which slides over this opening for focusing, is slid back to admit a printing-frame which serves the purpose of plateholder, and has proven much more convenient than the usual form of plateholder. This is used mostly for copying on  $3\frac{1}{4} \times 4\frac{1}{4}$  process-plates, the slides being printed by contact from these negatives. The camera is fitted, however, with a nest of kits, so that slides can be made by reduction with equal convenience, from any size of negative up to 8 x 10.

Another back is fitted, consisting of an 8 x 10 printing-frame, which is used for enlarging. An auxiliary bed is bolted to the front of the camera, with a slide on which the lantern is carried, containing the negative to be enlarged. Once the

picture has been focused, prints can be made as rapidly and conveniently as contact-prints, exposures being usually not over 30 seconds.

The objection may be raised against the outfit here described, that it represents too large an investment; that it is merely a collection of expensive instruments not warranted by the requirements of the amateur, to whom, in many cases, it would be mere extravagance. The reply to such criticism is that it represents a carefully considered expenditure, extending over a period of years, all looking toward a definite object. Sooner or later, the amateur-photographer comes to the point where he must decide whether to make photography a leading hobby, or only an adjunct to other forms of recreation. Until that decision is reached, anything he buys in the form of a camera is apt to be haphazard; but once he has decided to follow photography seriously, he should, if his means are limited, carefully plan the system he will follow, to the end that every cent of money expended may go toward the completion of a carefully thought-out, consistent equipment. Photography is apt to be an expensive amusement; it is extravagant only when followed without adequate thought or plan.



WRECK AND SEAGULLS

W. T. STARR



# Studio-Coupons—What Shall We Do With Them?

JESSIE ROBINSON BISBEE



HE popularity of the fallacy "something-for-nothing" is probably as old as humanity. No doubt, primitive man—in some way or other—tried to prove its glittering promises real. The world is still trying the theory out. Pick up any daily paper and you will find the "something-for-nothing" idea elaborated upon in all sorts of sparkling appeals. How many times have you seen advertisements offering everything from a pin to a piano "at less than cost"?

The average American consumer is eager, indeed, for anything that looks like a bargain—something for nothing, or something for less than it ought to be worth. It is not strange that this national tendency should have an influence upon the photographic profession. Perhaps its result is most pronounced in the widespread coupon-system. From the Atlantic to the Pacific, from Canada to Mexico, city-studios and small-town studios, alike, have used the coupon- or ticket-plan to stimulate business.

Coupon-selling is a profession in itself, and the forms of coupons are many and varied. But all meet on the common ground of a reduced price; for instance, by purchasing the magical ticket or coupon, the buyer may receive two photographs worth twenty-five dollars a dozen for "fifty cents to the salesman and fifty cents at the studio." Sometimes, the salesman collects a dollar with the same amount payable at the studio; sometimes he collects a dollar with the understanding that nothing is to be paid at the studio. But it matters little about these differences in coupon-plans, for the principle is the same; the customer is getting the pictures at a greatly reduced price, sometimes at less than half-price, sometimes at about twenty percent of the average price for the same work in this same studio, and sometimes he gets the pictures for nothing—merely for the walking away with them!

Such a proposition is fundamentally unreasonable and it is economically unsound. One price or the other must be wrong. No photographer who is justified to ask twenty-five dollars a dozen for portraits can possibly afford to sell two for two dollars—which is the offer of a very popular coupon-ticket. In reality, he sells two for one dollar; for the agent, of course, keeps the first payment.

A photograph should mean something more

than mere finished material. It is not merely an exposed plate, a finished and mounted print. It should mean thought, skill, ability; it should mean the careful interpretation of each sitter's best characteristics. The product of brains is high-priced in these days in any line. Why should a photographer not charge for knowing how?

Knowing how is the open sesame to success; why should a photographer overlook it? A master-mechanic was once called to a certain factory to find a break in the machinery. Many laborers were idle while the machinists were searching in vain for the trouble. The master-mechanic came and found the cause in about ten minutes; he repaired it in even a shorter time. He presented his bill—fifty dollars and fifty cents. The superintendent of the company was puzzled. "We are willing to pay you what you ask," he said, "and we consider this charge reasonable; but I should like to know how you happened to add the fifty cents to your bill." "Why that is for turning the bolt that adjusted the trouble," the mechanic answered. "Then what is the fifty dollars for?" "That," replied the mechanic, "is my charge for knowing how." Sometimes I think that photographers are the only people who entirely neglect to charge for the knowing-how part of their business.

Then, there is the item of over-head expense. The coupon-photographer reasons this way: the plates cost fifteen cents, the paper ten cents, the mounts fifteen cents; charge a dollar and the profit is sixty cents. He forgets rent, equipment, heat, light, telephone, service and time, and that precious element that life itself is made of—he forgets all but the mere profit on material.

Of course, the coupon-photographer and the coupon-salesman will present their argument at this point; it is always this—the profit comes on the sale of duplicate prints. So it does. But what is charged for the duplicate prints? Photography, like printing—like anything else requiring individual treatment—presupposes that the heaviest expense and the most work must be expended in getting ready to make the first copy. The making of the negatives, the submitting of the proofs, the retouching—all must be correctly done, even though but one print is ordered. It is because of this that the average studio charges about a two-thirds rate for the first half-dozen. This is reasonable, and is accepted as just and thoroughly businesslike by the public.

But the coupon-studio reverses this. The coupon-studio delivers the two 8 by 10's mounted for two dollars, and for the duplicates often quotes the price at one dollar and a half or two dollars each. This is inconsistent, and the average purchaser of photographs knows it. He knows well that photographs should cost more in small quantities than in larger numbers. He presumes that the photographer is making a profit on the first transaction — why should he not think this, for he is paying the price he set for himself — and he resents the paying of the advanced price for duplicate prints.

Generally speaking, there are two kinds of regular coupon-studios: the one, usually located permanently in a city, and putting on one coupon-whirl after another; and the traveling coupon-studio, which goes from town to town with aggressive ticket-campaigns, and leaves as soon as the deadly business-reaction begins. I admit that both of these studios, as a rule, are successful in the sale of duplicates — they have to sell them; it is their fight for existence; they must virtually force the duplicate orders upon their customers or close their doors. The receptionists in these studios must book high orders by any means at their command or their usefulness is over to the studio which employs them. It is a commonly understood fact, in some of the larger coupon-studios, that the order must be placed before the negatives are made — he who hesitates gets a blank plate in the posing-room. Often, it is hard to get early appointments for coupon-sittings until mention is made of wanting extras or smaller pictures finished.

These methods are unethical and unworthy of the photographic profession. Any photographer should be ashamed to obtain business in this way. Many photographers who dislike such a system, and the rather questionable standing it gives a studio, feel that they are forced into it by competition. Don't do it — don't do it! And I am not speaking idly, for in our own studio we know what it is to fight coupon-business, both the coupon-campaigns of resident and permanent competition and those of traveling coupon-concerns. But we have never put out a coupon and we never will — not if every other photographer in the state does it, not if they all do it at the same time. *If the time ever comes when we cannot maintain our business by good workmanship, courteous service and legitimate advertising, we will certainly close our doors.*

Of course, the coupon-salesman will maintain that coupons are a channel to legitimate advertising. "A man has a right to make two 8 by 10's for a dollar if he wants to do it." Time and again professional coupon-salesmen have impressed

this fact upon my mind in exceedingly ruffled tones. Certainly he has a right to do it. A man has a right to go out to our thousand-foot canyon and jump over into it, if he wants to do it. The state would interfere if it knew it in time; but usually the state knows nothing about such cases until the thing is done. However, when we read of the person who took the river-route, or the canyon-jump, or the blowing-out-the-gas way to destruction, we do not say, "Here is a man who used his liberty, who did what he had a perfect right to do." We are more likely to say, "Poor fellow, his mind was unbalanced when he committed suicide." Most assuredly, it is within the rights of any photographer to imbibe the coupon-idea, but it is pretty likely to be fatal both to reputation and finances sooner or later. You will find very few coupon-photographers listed in Dun's or Bradstreet's. Many of them are not gilt-edge risks in a financial way; ask their dealers.

The coupon-man places strong emphasis upon the crowds which the coupons bring into the studio. Coupons do attract a crowd, indeed, but every department-store in the land knows that it is far easier to draw a crowd than it is to make a profit on it. The business that coupons bring to a studio is abnormal — abnormally crowded as to sittings, usually abnormally poor as to workmanship, and abnormally ridiculous as to price. Abnormal things and times of any kind are of doubtful benefit.

The believers in coupons make full use of the argument that all stores have cut-rate sales. Stores do have sales, and with a good reason, for a merchant must deal with rapidly changing styles, with seasonable materials and with perishable goods. The photographer has not one good excuse to make photographs more cheaply in one month than in another. Though it is a fact that, in his strange way of reasoning, many a photographer puts on a holiday-offer or discount for the month of December, when every reputable studio should be more than busy with regular work at regular prices. And even though most stores do have special sales, no store ever sold a can of corn at thirteen cents one day and at one cent the next. Every woman in the town would be fearing ptomaine-poisoning if it did. And yet this is parallel to the average coupon-offer and contains about as much logic.

Would a theater-manager put on the best play of the winter at half-rate? Would he open the doors to the people and say, "Come and sit, without money and without price?" No, indeed! But a photographer will give his largest and best work away for a song, and will insult and degrade it by tying a coupon to it. The theater-manager





WHERE THE WAVES MEET

JAMES ALLAN

now-a-days makes his house pay a fair percentage of interest on dramatic plays or he sets up a screen and runs a picture-show. Does not the studio that issues coupons acknowledge by this very act that it cannot maintain itself at regular prices? Is not the coupon-scheme a sure road not to the two-dollar-a-seat patronage but to the five-cent-movie-class of business of the photographic profession?

Think well, you who are urged to enter the coupon-race! The solicitor says, "*My work*, 85 percent of it, will bring you orders." Do not forget that it is your negative, your prints and your salesmanship that must bring the orders — if there are orders. The coupon-salesman will be miles away at this time, unloading grief upon another photographer. He will tell you that he will fill your studio with "the best people of the town"—always and only the best people, you know. Bear in mind this fact: he will sell to any one who will buy; it means fifty cents or one dollar to him; it means his livelihood. And many, many times he will promise to the purchaser all sorts of extra concessions. I've known coupon-salesmen to promise to include a framed 16 x 20 enlargement for good measure. Don't blame him too harshly; the photographer who thought so little of his work and his business as to send out such a man on such a basis more than half-invited such treatment from the agent. Another

enterprising coupon-salesman showed me bluing-paddles that he sold as a side-line! Oh, what have we meant — we who have seriously chosen photography as our life-work — to sit idly by until such practice has become common.

As I write this, letters have come from the resident-photographers of the state-capital telling of the unequal struggle they are having with a traveling coupon-photographer. The daily papers published a part of the speech of the coupon-man, made before the city-council, in which he makes eloquent comments as to what he will do with the capital-city of this great state in the event of its interference with his coupon-sales. The council took the matter under advisement and, while it is considering, coupons in great numbers are being sold and redeemed by this coupon-studio.


The condition is serious. Shall photographs be regarded as art or as merchandise? If you want them considered as art, keep out of all coupon-and cut-price plans. Keep your prices high and your ideals higher. Or shall photographs be tossed about as a piece of goods on the counter? Shall they be exchanged for a ridiculous printed slip sold here and there by any one to any one? Some studios even resort to the trading-stamp or premium-plan.

If we do not respect our own work, it is hardly likely the public will value it. If we say that our

work is worth only a dollar a dozen, the public will decide that probably that valuation is quite high enough. If we want to make photographs at less than cost, there will always be numbers of bargain-hunters to fill our studios. But do we? We need not do it, you know, unless we choose. It is for us, the photographers, to say whether

the next generation will hold our profession and our work in high esteem or in cheap repute. And if photography is to be considered as a real art — as really worth while — to-morrow is a day too late to begin to discourage coupon-arrangements. Let us all help — and to-day is the time.  
*American Annual of Photography.*

## How To Obtain Soft, Rich-Toned Negatives

HE reproduction of tone-values with ordinary plates is untrue to nature, as a rule, and all the more so the greater the contrast between the lights and the shadows. But modern photography demands not only correct reproduction of the light portions, but a certain balancing of the tone-values, or, practically expressed, a soft, full-toned, but certainly not "tony," diffused picture.

For the attainment of this object an improvement in the color-reproduction by increasing the color-sensitiveness of the plate helps wonderfully. But slight dependence can be placed on this, however, when the colors in themselves have little or no contrast; but the contrasts produced by lighting, etc., then play a much more important part. This latter is not only of extraordinary value in portraits, but in landscapes, architectural views and, especially, interiors.

In such cases there is mostly only a choice of alternatives — either to expose for the shadows, and so lose the tone-gradation in the lighter portions, or to expose for the lights, and get spotty shadows entirely without detail. In these circumstances one is easily disposed to seek safety in as soft a working plate as possible, on the supposition that a soft-working plate is capable of equalizing matters without further trouble. That this cannot be done without further work, and, especially, how far it is practicable, one readily finds out when the so-called laws of intensifying photographic plates are clearly understood.

In order to obtain on a photographic plate, by development, a visible impression or "blackening"—if the developing is to remain within practical limits—a fully adequate light-impression is necessary. If we allow just enough actinic light to reach the plate to produce a barely visible blackening, this quantity of light indicates the "swelling-value" of the plate. If we increase the quantity of light successively, the blackening naturally becomes more intense—at first only slightly, but later more rapidly. With continued exposure to the light, a stage is finally reached in

which the increase of intensity is proportional to the amount of light received. If the exposure is still continued, a point is again reached in which the blackening no longer corresponds to the light used, but remains almost constant, and finally even reaches a point where the density appears to decrease with the increasing light.

If we now take an intensity-scale beginning with the swelling-value and ending with the point where the effect of the light changes (decrease of blackening), we will find that it does not progress uniformly, or, as they say, "run straight;" but at the beginning and at the end shows marked irregularity, forming stations, as it were. The first of these stations, however, forms the shadow-details, since the blackening-value no longer corresponds to the light-effect; but in the second, because the highest light-effect value below it is reached through uniform blackening, the lights or their details must be unfavorably affected.

The whole scale of intensity may be compared with the tone-scale of a piano which in the middle is correctly tuned, but above and below is out of tune. If the range of a piece of music comes within the correctly tuned portion, there is nothing to prevent a correct rendition of the piece; otherwise this is impossible.

Exactly in the same way in photographic practice, only the middle and continuously progressing portion of the scale of intensity comes into action. The longer it is, the richer it will be naturally in tones between the least and the strongest blackening, or, in other words, between the deepest shadows and the highlights. If this graded tone-scale is suitable for any purpose—let us say for an ordinary portrait—we can without more ado select as the proper thing a soft-working plate, since it offers all the practical gradations of tone. The next thing necessary is a correct exposure, as too much or too little always causes loss of tone-gradation, in the first case in the halftones adjoining the highlights, in the latter in the shadow-details. But if the tone-scale in neighboring parts is shorter, a



loss of tone upwards is unavoidable, since, in order to escape detailless shadows, a longer exposure than is suitable for the lights must be given, and thus the lighter halftones get the intensity of the highlights. If an attempt is made to overcome this difficulty by stronger printing, then the shadow-details are again lost without any gain in the halftones.

The case is just the reverse when the normal tone-scale is very large. Every increase in exposure then brings a gain in the tone-scale, since there is extension both downwards and upwards, and overexposure is then entirely permissible within a wide range, corresponding, of course, to the length of the tone-scale. The greater the contrasts are, the further the time of exposure can be increased, and the better the results will be when such increase is really possible.

The extent of the utilizable portion of the gradation-scale can be determined only by the use of a plate-tester and the measurement of the fields so obtained according to their density (covering-power). Professor Miethe and E. Stenger have published the results of such tests with three different kinds of plates; viz., Agfa, Seed and Agfa Special, and found that the Agfa Special plate was much superior to the other two

as regards the extent of the gradation-scale, and permits a correspondingly large increase in the time of exposure. In practice it was found that the Agfa Special plate with four times the normal exposure, which is a quite unusual excess, not only showed no loss of gradation in the densest portions — the highlights — but that the range of tone was increased. The exposure might be prolonged to ten or twelve times the normal without noticeable deterioration in the highlights.

The advantage of ample exposure — or even overexposure in certain circumstances — can, therefore, be utilized to the fullest extent with plates of the class mentioned, and this makes them extremely valuable for the object indicated. The especially important distinction between the local tone of the clothing or of the background and of the flesh-portions of portraits can be well brought out in poor light, and both the modulation and the plasticity are preserved. Every professional man who takes home-pictures, where long exposures are necessary, can judge the value of this quality. The old prescription to expose for the shadows, and the modern demand for negatives rich in details, can, therefore, both be satisfied by overexposure.

J. K., in *Photographische Rundschau*.

## The Use of Chiffon in Enlarging

DAVID IRELAND



THE purpose of this article is to explain a method of control in enlarging which will enable the readers of the *A. P.* to improve very considerably the quality of their work. Straightforward enlargements from negatives of critical sharpness are apt to have a crude appearance which renders them disappointing. To avoid this it is sometimes recommended to throw the image on the easel out of focus; but a more satisfactory method is to use black chiffon in front of the lens. The fabric should be of the finest and closest possible texture, and it is convenient to have the chiffon mounted in small cardboard-frames, in thicknesses of one up to four. Fine chiffon is not the easiest of things for masculine fingers to handle; but if a three-inch square hole is cut in the center of a piece of cardboard, the chiffon can be attached along the top and down one side with a little gum, drawn taut over the opening, and similarly fixed on the bottom and the other side. When dry, another thickness may be applied in the same manner. It is well to paste down a piece of card, with a

similar opening, for protection, and diffusers made in this manner will stand continuous usage for a long period. The image having been focused sharply on the easel, the diffuser is laid up against the front of the lens, and the exposure made.

It is the writer's experience that once a worker has been put in the way of using such diffusing-screens, their employment is invariable. In the case of portraits, any roughnesses of skin-texture are smoothed as effectively and more naturally than by the retouching-pencil, whereas landscapes have their beauty and atmosphere greatly enhanced. The choice of diffuser may be left to individual taste; for portraits with a two to three-inch head, a one- or two-ply screen will probably be preferred, whereas for landscapes a three or four-fold one may be used. A cardinal advantage of this method of diffusion is that, no matter how strong the negative, there will be no patches of pure black or pure white, and, although the outlines are not thrown out of focus, they assume a softness which, in the case of extreme diffusion, say with six folds of chiffon, approaches to what one might call "dreaminess."



GIRL'S HEAD  
J. CHESTER BUSHONG



One of the few disadvantages attending the use of orthochromatic or panchromatic plates and light filters is that one is sometimes apt to get the distance a little too distinct and near; this can be remedied when enlarging by holding one of the chiffon-carriers (one side being cut off to expose the edge of the fabric) in front of the

lens, so as to shade any portion desired, thus rendering it not only lighter but also softer.

As to the effect on exposure, the particular quality of chiffon used by the writer is found to increase it by one-half for each thickness used, thus: One, half more; two, double; three, one and a half times, and so on.—*Amateur Photographer*.

## The Angle Included in a Picture



ONE of the changes which have been taking place gradually in pictorial photography has been a reduction in the angle included by the picture. A careful study of the exhibits at any of the leading exhibitions is sufficient to show that there is a very large proportion of narrow-angle renderings, whereas a few years ago there were very few which deserved to be so classed. In writing of wide and narrow angles the terms without further definition are only relative, so that something more specific is necessary to a clear understanding of the matter.

In the days when landscape-photographers habitually carried two lenses, these were usually a rapid rectilinear of focus not less than the diagonal of the plate, and a wide-angle rectilinear of about half that focus. So that for a half-plate outfit one might have an eight-inch and a four-inch lens, though often the R. R. would not be longer in focus than seven inches, and the wide angle would be of four and a half inches or a little over. Even with an eight-inch lens on a half-plate it is perfectly possible to get strained-perspective effects, as one may often see, whereas the wide-angle instrument constantly furnished examples which were brought forward to demonstrate that photography gave distorted drawing, quite different from that which the draughtsman or painter produced.

We need hardly tell the readers of *Photography and Focus* that this charge was unfounded, and that what was really denounced was the inclusion of too wide an angle. If the lens used is one of sufficient focal length in proportion to the plate, the drawing will be absolutely perfect, will be precisely that which is taught in all art schools, and which all artists with pencil or brush strive to attain, although they necessarily fall short of the accuracy of photography.

Modern workers, however, appear to be coming around to the view that even the angle included by an eight-inch lens on a half-plate is too wide for pictorial effect. In some cases this opinion may have resulted from their own study and observation, in many it has not been consciously

formed at all, perhaps; but a line of work has been followed which expresses it. We need not say that we refer to enlargement from a portion only of a negative.

Many hand-camera workers employ a lens of five or five and one-half inches on a quarter-plate, or in that proportion. That is to say, the focus of the lens is equal to the diagonal of the plate. But out of the negative so obtained they pick a piece, say, one and one half by one inch for enlargement, and the diagonal of such an area is less than two inches. So that the enlargement includes an angle equal to that obtained by a lens of a focus three times the diagonal. Our picture is the same as would be given with a lens of sixteen and one-half inches on a quarter-plate, or of twenty-four inches on a half-plate.

Enlarging, it should be noted, does not affect the angle included at all. That is settled by the ratio between the focus of the lens and the diagonal of the area on the negative which is included in the enlargement.

There is no doubt that, although by the side of the angles ordinarily included these seem very narrow, the pictures obtained are far more nearly what the eyes see. When an observant person begins to use a camera, he is constantly finding that subjects which to the eye seem to be effective, when seen on the ground-glass have lost much of their power, by reason of the inclusion of so much more on the plate. The subject originally seen appears on the screen as only a small patch in the middle of it. To remedy this, the camera is carried nearer, and the result often is to find that from the nearer viewpoint we do not get what we want at all. Practice in photography undoubtedly modifies the way in which we regard subjects, and we gradually accustom ourselves to judge of subjects on the basis of a wider angle; but it is very doubtful whether there is anything gained by this, rather the reverse. The wide angle exaggerates the size of foreground-objects and dwarfs distance. A small cottage will tower up above a great mountain, and a few tussocks of rough grass will block out the whole expanse of a lake. There are occa-



LINGERING WINTER  
WILLIAM LUDLUM, JR.





A SOUTHERN DREAM

J. H. FIELD

sions when we welcome an effect which does much to overcome the frequent difficulty of providing a strong foreground; but it is a thing which may easily prove a snare.

Such a proportion between focus and diagonal as 1:3 is often met in telephotography with lenses of fixed separation. A sixteen-inch lens on a quarter-plate is now frequently used, and those who have tried it know what a power it gives

them. There is a feeling of truthfulness and a freedom of exaggeration about the results so obtained which are not to be got when the ratio is 1:1, or less, as it so often is; and it is not surprising, therefore, that pictorial workers tend more and more to lessen the angle included in their pictures, either by the use of a long-focus lens of the type referred to, or by enlarging from part of the negative only.—W. D., in *Photography*.



## EDITORIAL



### The Advantages of Full Exposure

**A**MONG the faulty photographs that are occasionally offered PHOTO-ERA, and invariably returned, are underexposures. Prints of this character are generally illustrations to technical articles in which the writer recommends the use of miniature cameras. In this case, the pictures of well-lighted subjects, such as marines and mountain-tops, evince no symptoms of underexposure; but others that are marked by sharp contrast in light and shade appear excessively undertimed. A print showing a white, ragged band against a black background, without any detail whatever, was intended to represent a river in a hilly region. Another print depicted a wood-interior in winter, with a delightful play of sunlight on the snow; but the trees were black and without character. A living-room was pictured; but here everything save the highlights was veiled in obscurity. A girl at the piano is a familiar theme; but unless the figure is arrayed in a white or light-colored costume, the face, the music and the keys are the only visible objects, and these are generally shown as glaringly white. These faults can be easily avoided if the camerist would but appreciate the difference between well-lighted and badly lighted subjects, and that the latter require much more exposure — according to a simple principle.

The user of a miniature camera is generally loath to carry a tripod, however light and compact; but experience will teach him that this accessory is indispensable to successful work in the field as well as indoors. But of still greater importance, however, is the question of adequate exposure in connection with serious work. The common practice is to underexpose and to rely on searching or diluted developers for compensation. There may be the fear that, in the case of strongly illumined landscapes, in marine-subjects and snow-scenes, the beautiful gradations of light and shade may be lost if an excess of time be given; whereas, in exercising this precaution, the end is attained at the expense of detail in the shadows. That great desideratum, a transparent shadow, is beyond the pale of achievement when the exposure is inadequate. The worker, desirous to preserve the color-values of his picture — employing, as he does, color-sensitive plates and color-screens — is

likely to get too abrupt transitions, from one color to another, by undertiming his plates. Far better to determine the correct exposure by means of a reliable meter. Many experienced workers prefer to err on the side of overexposure and, by their intelligent control of the developer, to correct the excess of time allotted. This procedure has been found to work admirably with snow-scenes and waterfalls, where even low-toned objects, such as rocks and trees — unless abnormally dark by being water-soaked — assume character and detail. Exemplary pictures of this character, by Dr. D. J. Ruzicka and Charles M. DeBevoise, appeared in the January issue of PHOTO-ERA. Incidentally, it may be well to point out that a fully timed or slightly overexposed plate — of course, developed judiciously — does not require the common expedient of locally reducing objectionable highlights in either the negative or the print, which process, unless employed with skill and taste, produces ludicrous if not ruinous results.

Many of our best workers make it a practice to overtime their plates, developing cautiously — beginning with a diluted solution — and obtaining the desired density by the addition from the pyro solution, if that be the developing-agent used. These workers find that in this way — using plates of medium speed and avoiding excessive density — they obtain negatives that are notably rich in detail, gradation and color.

The foregoing advice applies with even greater force to miniature negatives made for the purpose of enlarging. They should be soft, full of detail and, naturally, without physical blemishes. Here, correct exposure is vital, and, whereas underexposed negatives yield very unsatisfactory enlargements, overtimed ones are equally undesirable. To the amateur eager to improve his work and to minimize his failures, the following suggestions will prove of great help. Expose for the shadows; develop for the highlights; expose fully for strongly lighted subjects; give normal exposure to subjects lacking brilliancy or contrast; overexposure and underdevelopment produce flatness; underexposure and overdevelopment produce excessive contrast; overdevelopment of normally or overexposed plates also produce harshness; despise not the tripod; consult a reliable exposure-meter, and keep a record of all exposures as a guide for future work.





# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any amateur desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Flashlight Competition

Closed December 31, 1916

*First Prize:* J. G. Burns.

*Second Prize:* Bertram F. Hawley.

*Third Prize:* W. R. Bradford.

*Hors Concours:* T. E. Halldorson — portrait, published in February issue.

*Honorable Mention:* Elmer A. Beard, R. T. King, T. W. Lindsell, Paul E. Truelsen.

## Subjects for Competition — 1917

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.

MANY workers conceive admirable pictorial themes; but lacking knowledge of artistic principles and harmonious combination, they seem to be unable to carry them out to a successful and logical end.—W. A. F.



THE LITTLE QUESTIONER

J. G. BURNS

### Home-Portraits — Advanced Competition

Closes April 30, 1917

DOUBTLESS the army of amateur photographers — that has grown to such astonishing proportions of late years — has been responsible, in a large measure, for the great change in the standards of the professional workers. The amateur was bound by no rules. His debonair manner of ignoring all precedents seems to have jolted the professional out of the deep ruts in which he had been running so long. Working in the homes, the amateur went to work cheerfully in conditions which would have seemed impossible to a more “well-informed” person. To the astonishment of the “photo-wise” he made good, and produced likenesses eminently satisfactory in spite of — if not because of — this unconventionality. He had no prejudices against that *bête-noire* of art-critics — a double lighting; he did not know that portraits could not be made against a lighted window — so he made them; he rode roughshod over all rules as to the angle of illumination and the location of catchlights in the eyes; and, when his

professional predecessor came to scoff at his work — behold! — he not only remained to admire, but went forth to do likewise — greatly to the betterment of his pictures. At the present time, many professional photographers have no studio, but make all their sittings at the homes of their patrons. Others combine this work with their regular studio-activities.

That PHOTO-ERA readers are interested in home-portraiture is evidenced by the very large number of excellent prints entered in last year's contest. Aside from the three prize-winners, eighteen were found deserving of honorable mention; and so many fine prints were left over that a list of fifty was added as deserving of special commendation.

The cup-winning picture was a very studio-like portrait of a man, well-posed and spaced. The face was in a low scale of light, with the strongest accents on the gray hair at the temples. It is a soft-focus picture, and detail is entirely lacking in the coat, which is suggested by an almost completely flat tone that blends with the background on the shadow-side. The placing and treatment of the hands is admirable, as it is in a lower



key than the face, and balances well the head in the diagonally opposite corner. The prints that took second and third honors were of a very different type, both being in a lighter key and more full of detail. The focus in neither is over-sharp, and each has a suggestion of "hominess" that is more pronounced in the second-honor print of the small boy seated on the floor of the nursery with his toys. The simplicity of the setting is a valuable object-lesson, and, indeed, all three prize-winners exemplify this virtue to a marked degree.

One of the honorable-mention prints published is a well-lighted window-picture, whereas the other is an example of the dangerous double-lighting effects—dangerous because of the difficulties in the path of successful accomplishment. If the lights are too nearly of a strength, or so used as to be too evenly balanced in the lighting of the face, the result is disaster—as far as the laws of art are concerned. In this example, the lighting—especially of the man's face—comes perilously near the danger line, but just misses because the stronger light occupies the smaller area.

In making pictures in a room, it is frequently the case that a corner between two windows seems to be the best-lighted place available, and some very pretty effects may be obtained in such a location. The thing to avoid is a dark line down the center of the face, with the two sides lighted equally. The head should be so turned that it will be fairly well lighted from the weaker source, and then enough light should be admitted from the stronger source to pick out just certain accents of strong light. Of course, the opposite effect may be used—letting the stronger light be the predominant one—but, as a rule, the strong light on the small area is preferable. When used properly, the double lighting does away with the inky-black shadows so prevalent in home-portraiture, and it yields a very satisfactory picture.

One great secret of success—in bust-pictures, particularly—is that of proper spacing. The head should not be in the center of the picture-area, but should have more space in front of the figure than behind it. It is seldom wise to make a front-view of both face and shoulders. If the view of the face is to be full-front, have the sitter turn the body slightly away from the camera, and then turn the head toward the instrument. In this way a more natural pose is obtained and also more animation. In doing this, there will always be a "back" where the space should be narrower than in front. The head should be fairly near the top of the picture space. When the sitter wears a light waist and dark skirt, this placing of the head high may necessitate showing farther down than is desirable, and recourse may be had to the professional's method of overcoming this by the vignette. I hesitate to suggest this, as in some quarters it is anathema. It is to be deplored as an inevitable and unvarying habit, for it is a sort of confession of inability to fill a space well and pleasingly. It seems to me, however, that the soft blending of the lines into the tones of the background is preferable to the abrupt change from light waist to dark skirt in bust-pictures. A home-made vignette may be improvised easily by taking a piece of dark cardboard and cutting a deeply toothed curving-top—lowest in the center. This can be fastened to a chair-back or other support, and placed close to the camera at such an angle to the light that its tone will match that of the background, and at such a height that it will cut the waist wherever it is desirable to have it blend off. Of course, where a white ground is used, the card should also be white. This is very important.

A mistake often made by home-workers is to cut down the exposure when sunlight enters the room. One

of the maxims of lighting is that the stronger the light the heavier the shadows. As one must expose for the shadows, full time must be given to balance up an over-strong light. Of course, it is possible to produce, in the house, pictures that could not be distinguished from studio-products; but the home-environment offers opportunities for individual and unconventional backgrounds and settings—therein lies much of their charm. As the warmer months come on, the shaded porch, with its vines and flowers, offers tempting backgrounds with splendid lighting-opportunities.

A fine setting for an indoor-portrait is shown in the first-prize picture in the Beginners' Competition in the same number of PHOTO-ERA that shows the winners in the last home-portrait contest (June, 1916). I suppose this picture tells too much of a story to be classed as a portrait-group; but the simplicity of the whole setting and arrangement is admirable. In some rooms it seems almost impossible to obtain adequate illumination for portrait-work, and it becomes necessary to cut the Gordian knot by having recourse to the flashlight, or—even better—to the use of the gas-filled electric lamp. The beauty of the flashlight is that exposures are virtually instantaneous, and children may be caught without movement. There are many guns and portable skylights on the market that simplify the process very much. Some sort of arrangement that enables both flash and shutter to be operated by the same bulb is a great convenience, and if an open flash is used a cheese-cloth screen should be so arranged as to diffuse the light and obviate harsh shadows. A plain background of a neutral shade may be turned toward or away from the light in such a manner as to give a wide range of effects from light to dark, and it is preferable to a more ornate setting. Often a wall-paper of the right shade will serve the purpose of a background admirably. In any case, avoid one of a loud pattern, as the result will be quite inartistic. Simplicity in costume and accessories is as much to be desired as in background and grouping.

Even more and better work is to be expected in this contest than in last year's, and here 's to the winners!

KATHERINE BINGHAM.

### An Enlarging-Note

USERS of the vest-pocket spool-film cameras, so popular to-day, should pay special attention to the two pieces of glass in the enlarger or printing box that act as a negative carrier. These must be perfectly clean, free of dust, grit or scratches. A mere rub with a cloth or duster is not always sufficient to clean the glasses thoroughly. A better plan is to rub them with a rag moistened with petrol or methylated spirit, followed by a polish with a soft cloth. The glasses should not be handled in the center, where the negative comes, more than is necessary, or finger-prints will be found upon the enlarged postcards. Any handling of the glasses should be at the ends, where no harm can result. Grit between the glasses will result in the negatives being scratched, especially when film-negatives are rarely, if ever, varnished, and the writer has known of a case where grit-particles were the means to ruin a valued negative, due to scratches in the carrier. Another point to be watched for, when putting negatives into position, is chippings of glass from the edges, which would also produce the defect mentioned above. It is quite important that all negatives intended for enlarging should be free of defects of this kind, and the points noted, though of a seemingly minor nature, deserve far more attention than they get from most workers.—*Amateur Photographer.*



A HUNTING-CAMP STUDY

BERTRAM F. HAWLEY

### Grain in Vest-Pocket Camera Negatives

THE number of workers to-day who use a vest-pocket camera wholly and solely, and who rely upon this to supply negatives capable of a great degree of enlargement, must be legion, and yet it often seems that one point of immense importance in negative making with this object gets overlooked entirely by most workers. To obtain a negative quite free of markings and scratches, and not over-thin, yet full of abundant detail, is not all that is required; for often we find that a negative, while possessing all these latter qualities, also has another that is not in the very least desirable—a coarse grain. This does not show in the contact prints at all; it is only when we come to enlarge it that we find it existent, and the only way to counteract it is to use a rough-surface paper. It is better, however, to prevent than to cure, and after some years' experience of the vest-pocket camera I would suggest a procedure that will make grain in the negative an unheard-of thing. It is caused by underexposure and

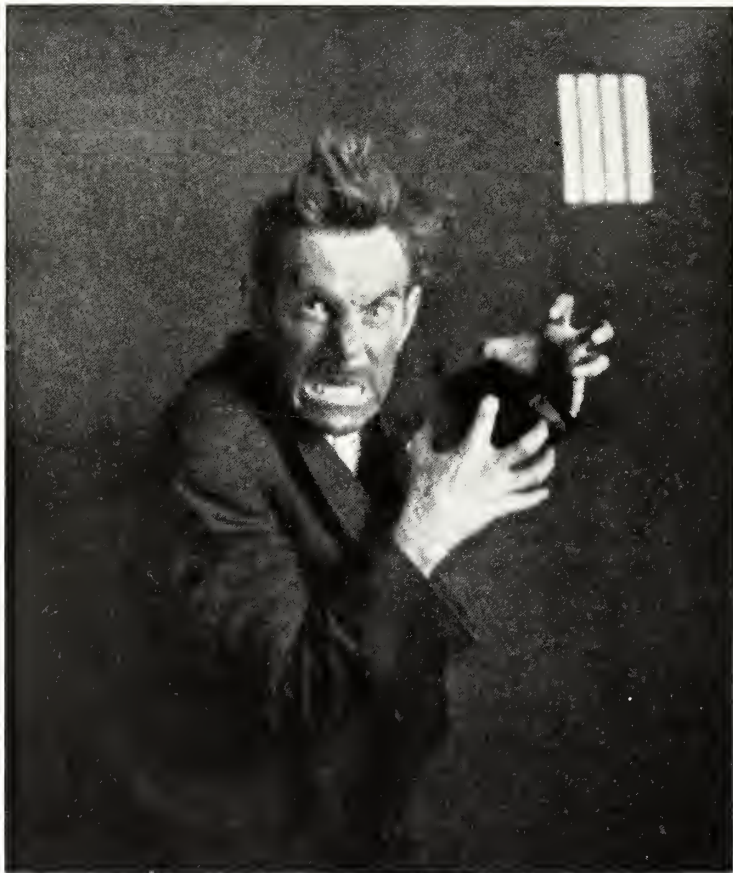
forcing the negative in an over-strong developer, and for this reason the systems of tank-development, using a solution at half or a third its normal strength, are ideal; or failing the use of a tank, the trouble can still be conquered if the dilute solution is employed, whatever system be adopted.—*Amateur Photographer*.

### A Note for Flower-Photographers

WHEN using a sheet of plate-glass over a sheet of black cloth to obtain reflections in a flower or still-life study, it is quite important to see that other details, such as the pattern on the wall-paper of the room, ornaments or furnishings do not show upon the glass as well, for such would have a very detrimental effect upon the composition, and destroy any artistic quality that it might possess. The best plan is to fix a piece of brown paper between the objects and the glass, and so avoid the inartistic note that might be caused.

*Amateur Photographer.*





THE MANIAC

W. R. BRADFORD

### A Dull Day for Woodland-Work

IN reference to the value of a dull day in photographing wood-interiors, F. writes, in the *Amateur Photographer*: "Very few photographers quite realize the value of a dull day for landscape-work; in fact, in the opinion of many quite experienced workers, sunlight is essential for the production of the best results; but it is to be noted that sunlight often introduces problems very difficult of solution, especially when the subject consists of extreme lights and heavy shadows, a very tricky combination to render successfully from the technical point of view. We very often find, however, that in woodland-work, for example, sunlight is reproduced very harshly, and such chalkiness is very detrimental to the quality of the result. In dull weather the present writer started off recently in search of woodland subjects, and found it possible to attempt many more subjects, and with greater success, than would have been the case had the sun been shining. The whole composition seems softer. There is a shorter scale of gradation between the highest lights and the deepest shadows, and the shadows themselves are more luminous and richer. We are all aware that sunshine tends to give a spotty effect in woodland-work, and

any possibility of this defect, and also that of harsh contrasts, may be obviated by choosing a dull day, or at least one in which the light may be described as 'diffused,' for the work. The exposures are slightly longer, of course, but provided a stand of a fairly substantial nature is used for the camera, this will not be found a serious drawback. It is certain that any worker previously unaware of the value of a dull day in woodland-work, who imagines that sunshine is essential, will do well to go to some accessible spot and test the truth of the above suggestion. It is quite possible that the solution of many difficulties in woodland-work—not one of the easiest branches of photography at any time—may be found."



### Like Most Photo-Era Readers

I BELIEVE that most men in business who are interested in photography could not keep up their interest if it were not for a stimulant like PHOTO-ERA. It keeps the coals of desire burning, and as a result a fellow cannot resist that longing to create or perpetrate something. Long live your journal! — A. S. WORKMAN.



# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS  
*With Reviews of Foreign Magazines, Progress and Investigation*  
Edited by A. H. BEARDSLEY



## The Metric System

SAYS the *Amateur Photographer* in a recent issue: "One of the changes foreshadowed by the after-war conditions will almost certainly be the adoption of the metric system of weights and measures. Many reasons combine to make this change all but inevitable; one of them is the opening up of the great field of trade in South America, for which Britain will make a very strenuous bid, and all the South American countries employ the metric system. Indeed, the only countries in the civilized world which do not employ the metric system are Great Britain, the United States and Russia, and in the United States the system has been legalized though not made mandatory. The non-use of metric units has already meant the loss of a considerable amount of foreign commerce, which has gone to Germany. Scientists are absolutely agreed as to the wisdom of the change, and when, ten or twelve years ago, there was a powerful movement in this country favoring the metric system, it was only some ignorant conservatism which foiled the projected legislation. We have grown wiser since then, and it is not difficult to foresee the meter presently replacing the yard, the liter the quart, and the kilogram the pound."

## Tight Lens-Combinations

SEVERAL times during the year it is advisable to remove the lens-combinations from the shutter or mount and wipe them carefully with an old linen handkerchief. Often the lens-combinations refuse to unscrew easily — if at all — and it becomes necessary to loosen them in some manner that is absolutely safe. One way — probably the best — is to apply a little kerosene oil to the joint between the lens-combination and the shutter or mount. Capillary attraction will soon draw the kerosene into the threads, and in a few hours the lens-combination should unscrew readily. In no circumstances use violence to try to unscrew lens-cells from shutters or mounts, as, invariably, such efforts result in serious damage to the efficiency of the lens.

## Altering the Focal Length

SOONER or later every photographer wants a focal length he has not got. The incompetent want it often — its absence is always the reason why they failed to make a picture, unless indeed that reason is that they brought the box-form camera out with them instead of the reflex! But seriously, the practical worker does now and then find himself in a tight corner, finding perhaps that a  $3\frac{1}{2}$ -inch lens would give him just the subject he requires, while a 4-inch will not. With small cameras and short focal lengths it is usually possible to rack in the lens until the required amount of subject is included, afterwards restoring sharp definition by stopping down to the smallest aperture. Such a plan obviously has its limitations, but on more than one occasion we have found it served our purpose. Another and more elastic method is the use of a supplementary lens, and those workers who use small cameras for much of their work may find it an advantage to have a few spectacle lenses of suitable focal lengths, which

may be placed in front of the camera lens in the well-known method adopted on many hand-cameras unprovided with focusing-adjustments. It is not a difficult matter to make a double cardboard cap, lined with velvet, the disc being annular, as in the case of the orange-glass cap used on the enlarger. One side will fit the camera-lens and the other side will take the spectacle lens, the velvet lining allowing this to be readily removed, yet holding it from falling out. Spectacle-lenses powerful enough to make a material alteration in the focal length may interfere with the definition by introducing their own uncorrected aberrations into the lens-system, so that a small stop will almost always be essential. But in many cases this is not a serious objection.—*British Journal of Photography*.

## Cleaning Stale Bromide Paper

SOMETIMES photographers are obliged to use bromide paper that is stale from long storage. One worker, who found himself in this predicament, discovered that alcohol — applied carefully with a tuft of cotton — would remove the objectionable discolorations at the edges of the paper. It seems that this worker used a piece of cotton saturated with alcohol to remove abrasion-marks from a glossy paper, and, inadvertently, touched the discolored edge of a print. To his amazement and satisfaction he noticed that with gentle friction the discolored edges of the paper became white again. No doubt other surfaces and kinds of printing-paper may be handled similarly and with very satisfactory results.

## The Single-Combination for Flashlights

NOT very long ago, a photographer focused his subject, and was disappointed to find that the image he obtained was too small. Then he happened to remember that his lens was symmetrical, and that, by removing one combination, he could obtain an image nearly twice as large with the other. A moment later — after he had removed the front combination — he was pleased to see that his memory was not at fault, and that the image was of the correct size. The picture was to be made by flashlight, and the photographer decided on the proper quantity of flash-powder to use in order to give ample exposure with an F/8 stop. When the sitting was finished, he hurried into the darkroom. Half an hour later he emerged with a puzzled look upon his face. The plates were considerably underexposed. How could this have happened with the powerful flash he had used? It was easily explained. When he removed the front combination, the lens immediately became four times slower and, therefore, required four times more exposure. The diaphragm-value of F/8 became approximately F/13.9 with only the rear combination in use — the photographer had neglected entirely to take this fact into consideration. It is of vital importance that the use of single lens-combinations be correctly understood with regard to exposure. Many admirable portrait and pictorial effects have been ruined by underexposure, causing the photographer disappointment and pecuniary loss.





# BEGINNERS' COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer*. Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed December 31, 1916

*First Prize:* William Baxter.

*Second Prize:* H. B. Rudolph.

*Third Prize:* A. S. Workman.

*Honorable Mention:* E. J. Brown, J. Louis Cunningham, R. W. Dawson, Chester C. Hart, Robert P. Nute, Geo. P. Russell, William J. Wilson.

Special commendation is due the following workers for meritorious prints: C. K. Baker, C. A. Barnes, Jr., James Burke, E. W. Congdon, Hubert C. Mohr, S. A. Schwarz, A. S. Upton.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

*My dear Mr. French:*

Your letter, notifying me that I had won third prize in the November R. R. G. Competition, was received. Please send me Mr. Paul L. Anderson's "Pictorial Landscape Photography."

I wish to thank you for the opportunity afforded to compare my work with other beginners, and I assure you that I am going to try to make the others "step lively" to beat me, for I warn you that my eyes are set on one of your PHOTO-ERA silver cups.

Again wishing you every success, that I believe you are meeting, I remain,

Yours truly,

HALVOR A. CAUM.



THE DAYS OF REAL SPORT

WILLIAM BAXTER

FIRST PRIZE — BEGINNERS' CONTEST

### House-Cleaning

At this time of year — when “the female of the species” is rampant with broom, duster and scrubbing-brush, and the evicted male is exiled to club or street-corner — it behooves the photographer to look well to *his* domain and to see that he starts the spring-campaign with darkroom and apparatus in apple-pie order.

However carefully one has done one's work and seen to one's equipment, an occasional overhauling is advisable. When the house-cleaning spirit is abroad it seems a logical time to make such an inspection of photo-paraphernalia. It is astonishing to see how dirt and dust will accumulate where it is least desired. If a room of any sort is set aside for photographic use, that is the place to begin. All shelves and drawers should be emptied of their contents and first carefully wiped with a damp cloth, to remove the loose dust and chemical particles. This done, a good scrubbing of shelves — where bottles of chemicals have stood — may save many subsequent spots on prints and plates. The walls — where chemicals may have been spattered — should be well cleaned, and likewise the floor. This “turning out” of drawers and cupboards will bring probably to light many things better thrown away, and possibly some material that is, or will be soon, out-dated — which should be used at once.

The work will be simplified greatly if all utensils that are not in common use be put out of the way, and only those in frequent demand be kept within reach. Careful storage of sensitive material will add much to its longevity. All such attention pays for the extra trouble involved. Trays should be looked over care-

fully and cleaned. An enameled tray, that has chipped until the metal is exposed, should not be kept in use. Any bath that contains silver will leave a deposit on the exposed metal. The iron is apt to rust and cause spots, so that, in any case, such a tray is poor economy. It is better to discard it and buy a new one. Rust on anything — scissors, knives or anything used about the darkroom or workroom — is a menace, and a prolific producer of mysterious spots.

Bottles or trays used for developer often become coated with a film that is removed easily by dilute hydrochloric acid. A thorough rinsing should be given such articles before using them again for developer. If labels have become discolored or have come off, their renewal will give a very fresh, spick-and-span look to a dingy shelf. When knives, scissors, pencils, etc., are all sharpened and put in their proper places, and everything is ship-shape, the pleasure of one's photographic work will be greatly enhanced.

Not only the darkroom, but the apparatus, itself, needs a careful going-over. Shutters should be tested at all speeds to see that they have not gone wrong. Lenses should be cleaned carefully and the bellows examined for leaks. To examine the bellows, remove the back of the camera, and with the shutter closed, place a heavy black cloth over the back of the camera, then, with your head under the cloth — which should be brought closely around under the chin and the bottom of camera, to exclude all light — turn the front and both sides of the camera toward a strong light and see if any pin-points or lines of light are visible. The first few moments may not reveal them, but after the eyes become accustomed to the darkness, they may detect



some stray gleams, which — if not too large or numerous — may be remedied by applying surgeon's plaster on the inside of the bellows. If too far gone, a new bellows is the only remedy. Streaks of light about shutter or lens-board are often overcome by a new coat of dead-black paint. Having examined the front end after this fashion, remove the lens, and give the plate or film end a thorough inspection in the same manner. The lens of most hand-cameras is fastened in by a collar screwed in from the inside of the camera. This should be removed carefully, the lens and shutter taken out, and the eye placed at this opening with the camera-back in place. If plateholders are used, one should be in position when the examination is made, to detect any fault in adjustment. When the lens is out, it should be taken apart — if a doublet — and both surfaces of front and back lenses wiped carefully with a soft piece of old linen. In reassembling, be sure that each lens is screwed home accurately and that the collar is firmly in place and holds the shutter in the proper position. Two small screw-heads on the shutter should fit into notches on the lens-board when it is correctly set.

The rubber of the bulb or its tubing may have deteriorated and may need renewing; the screws in the tripod-head may be working loose; the carrying-case may need looking over — numberless "tag-ends" will be found that, if put in condition now, may save much trouble and annoyance in the field. The time and possible slight expense entailed by such an overhauling will be more than repaid by the increased pleasure and ease in working and by the prevention of spots and light-streaks.

KATHERINE BINGHAM.

### Advantages of a Tripod

THE beginner who is content to be a mere snap-shooter will seldom have use for a tripod, but if he has any aspirations toward better and more artistic work, something of the sort is almost a necessity. Even when films are used, and there is no opportunity for the use of the ground-glass, there are many times when a slight time-exposure must be given to obtain the desired result, and some method must be available to give steady support to the camera. The time of clumsy and bulky tripods for small cameras has passed, and there may now be had metal tripods, so small and compact that they will go into a capacious coat-pocket. A new one issued last year has the advantage of folding flat and into very small compass. However, if one does not care to put the money into such a convenience, there is now on the market a clamp which makes a fairly good substitute. Its drawback is that it must have some solid support to which it can be attached. It is screwed into the tripod-socket of the camera and then attached to a chair-back or fence-rail or some such object. For work in the house or yard — where a chair may be moved to the desired location — this does very nicely; but when one is afield, the necessity to make one's picture from the viewpoint of the fence rather than from that of one's own selection is rather sad. Possibly a carriage or an auto might be brought into requisition nearer the desired location.

Interior-views necessitate the use of some support for the camera, and, although tables or other pieces of furniture may be used, it is very easy to move or jar the camera in such conditions, and the little clamp would soon save its small price in wasted material.

One never gets really the full pleasure out of view-making, it seems to me, until one has arranged one's composition on the ground-glass; and when this is done, the tripod is in constant requisition even for the snapshot. The ability to see one's picture full-size, and

to tell exactly where lines and space divisions are coming, makes an art — as well as a pastime — of picture-making.

KATHERINE BINGHAM.

### Starch-Paste for Mounting

MOUNTING with paste may be done either with one of the ready-made preparations which are on the market, or with ordinary starch-paste made at home. The latter is the cheaper plan, although if a quite needlessly large quantity is made up at once, the homemade may be as expensive as the ready-made. The starch-paste should be made an hour or two before it is wanted for use, so that it has time to get quite cold. It will be usable for a day or two after it is made, especially in winter-time; but the sooner it is used the better.

To make starch-paste, a very little ordinary household starch should be stirred up with cold water until it forms a perfectly smooth cream, quite free of lumps. (Half a teaspoonful of the dry starch is quite enough to make up at once.) When this has been done, a basin holding about half a pint should be filled with water straight from a kettle in which it is boiling, and left for a minute or two, for the basin to get thoroughly hot right through. The water is then emptied out, and without loss of time the cream is put into the basin and well stirred around while boiling water is poured on it. If the basin was hot, a very little of the water, if actually boiling, will be needed to bring about the change called "thickening," which is what is wanted. Instead of being white, the starch will turn almost colorless and transparent, and become much more glutinous. No more water should be added, but the starch poured out into a cold vessel to cool down. It should be quite free of lumpiness, but if there are any lumps present it may be squeezed through a piece of muslin.

*Photography.*

### A Focusing-Note

USERS of hand-cameras who focus by scale are often in doubt — when photographing near and distant objects — how to set the scale in order that each may be rendered equally sharp. Of course, in pictorial work, the difficulty is soon set at rest by concentrating all the interest on the principal object; but in other subjects, when it is required that the whole area of the negative be equally sharp, this setting of the scale presents a difficulty. It will be found, however, that if the scale is set for the nearest object, with the short-focus lenses used on the modern small camera, there will not be much to choose between the foreground and the more distant parts of the subject. With high-grade anastigmat lenses a slight departure from microscopic sharpness is hardly noticeable. Again, the scale may be set half-way between the longest distance, say twenty-five feet, and the infinity mark. If the points noted above are followed, there will be no degree of inaccurate focusing visible in the finished result.

*Amateur Photographer.*

### A Simple Hypo-Eliminator

ANY method which will help to eliminate hypo is always of interest to photographers. A contributor to the *Amateur Photographer* says that it is a truism that the simplest is often the best. Applying the remark to hypo eliminators, potassium permanganate may be recommended as an excellent and cheap reagent. It answers the purpose quite as well as potassium persul-



HAVE A NUT?

H. B. RUDOLPH

SECOND PRIZE — BEGINNERS' CONTEST

bonate, or anthion (potassium persulphate). A few grains should be dissolved in a pint of water, forming a pinkish solution. The negative should be washed in plain water for a minute or two, then transferred to the permanganate solution, which must be changed when the color is discharged. When the process is complete, the solution will retain its pink color — a convenient feature of permanganate — and the negative needs only a final rinse in water before being dried.

### Motion-Pictures and Eyestrain

MR. GORDON L. BERRY, acting secretary of the National Committee for the Prevention of Blindness, who has recently discussed the subject of frequent attendance at motion-picture houses, upon the eyesight, has arrived at the following conclusions: (1) that motion-pictures with defects of photography, manufacture and projection may prove injurious to eyesight; and (2), that eyestrain caused by viewing motion-pictures may indicate a subnormal condition of the eyes which should demand immediate attention on the part of an oculist; in other words, such pictures, while not the chief source of the trouble, may reveal its existence. Some conditions favorable to the protection of the eyes are a plate-glass screen, an auditorium as light as may be consistent with giving satisfactory detail in the pictures, and a seat in the center of the auditorium and never nearer to the screen than 20 feet, but the further the better. Without the best screens, films, projection, surrounding illumination and seating-arrangements, the "movies" are likely to prove a cause of serious eye-troubles. Due precautions should be taken.

### Developing Color-Sensitive Plates

At present, there are on the market several excellent makes of ultra-sensitive plates which — handled with care — produce very superior results. However, many photographers appear to be very careless in developing them. These plates are extremely sensitive to all light-rays and — therefore — should be developed in total darkness, to avoid fogging. This fact does not seem to be understood as it should be, even by capable workers. In one instance, some beautiful paintings were copied at considerable expense by a professional photographer, who spoiled the negatives by fogging them just enough to make them valueless. Though he used a perfectly safe light — safe for ordinary plates — the dull-red rays were sufficiently active to make an impression on the extremely sensitive emulsion. The use of color-sensitive plates is becoming more and more general, and it should be the photographer's duty to familiarize himself thoroughly with every detail of their practical and successful manipulation.

### Photographic Writers — Please Take Notice!

THERE is a big difference between a "light streak" and a "light-streak," just the same as there is a vast difference between a "light brigade" and a "light-brigade."

### Warned Off

*Photographer* — "Might I suggest that the expression be a little less severe?"

*Sitter* — "No, sir! This portrait is for my nephew, and if he sees me looking pleasant, he'll write for money!" — *Passing Show.*





## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**S. S. D.—Kodolon is an excellent developing-agent** if made up according to formula. It is exceedingly sensitive to bromide, however, and if a blue-black print is desired, only about a fourth of the amount of bromide called for in the formula should be used.

**C. A. C.—Your trouble with Azo Hard Medium cards** is no fault of your own. We are told that the yellowish whites are caused by the color of the new raw stock, the blue-white not being obtainable now.

**G. C. K.—Color-prints can now be made by strictly photographic processes.** The print—strictly speaking—is not on paper, but is composed of transparent films with a white-paper backing. The Hess-Ives process is quite simple but still rather expensive. The Hillock is exposed in the camera as one plate. It is, however, composed of two plates and a film, which are separated after exposure and developed separately. Prints of each are then made on specially prepared film developed in hot water, and each one dyed a separate color—one yellow, one magenta and one blue. When dry, the three are superimposed in register and with a white-paper backing. They constitute together the Hicrome "print."

**K. B. C.—Old-negative glass is quite in demand now,** and good prices will be paid by the Eastman Kodak Co., of Rochester, N. Y., or by Geo. W. Cary, 2968A Cleveland Avenue, St. Louis, Mo. Packing-directions will be sent by these concerns. The Eastman Kodak Co. also furnish shipping-tags for the boxes. Not more than 100 pounds should be packed in one box, and all plates should face in the same direction.

**F. H.—Stereo-cameras made in the United States** may be obtained from Folmer & Schwing and The Rochester Optical Co., Divisions of the Eastman Kodak Co., Rochester, N. Y.; also from Burke & James, Inc., and Sears Roebuck & Co., Chicago. If you are interested in the new, small, imported Stereo-cameras, you can obtain information from the C. P. Goerz American Optical Co., 317 East 34th Street, and R. J. Fitzsimons, 75 Fifth Avenue, New York City. There are many excellent cameras to be had with lens—and shutter—equipments adapted to all requirements of the Stereo-photography. First obtain all available descriptive matter and then decide which instrument will serve your requirements best.

**R. A.—Inaccurate shutter-speeds, due to dust in pneumatic valve,** may be corrected by having the cylinders re-buffed. This work should be entrusted only to an expert. In no circumstances should oil or grease be used. Any firm of acknowledged reliability can attend to the cleaning of your shutter, and will guarantee entire satisfaction.

**J. O.—Whether tank- or tray-developing is the best** depends, for a decision, on individual taste and requirements. One camerist may find tank-developing both efficient and convenient, and another may find greater pleasure and profit in darkroom-developing. However, the fact remains that tank-developing of plates and films is no longer considered to be experimental. Amateur and professional pho-

tographers have put the stamp of their approval on tank-developing. Autochrome and Paget plates are still developed by hand in the darkroom. The developing of these plates—or any plates and films used to obtain scientific data—requires constant attention during the entire developing-process, and they cannot be developed successfully in a tank, for the reason stated. For the average amateur, who is not interested particularly in the chemistry of photography, the tank is unquestionably the most convenient and efficient method to develop vacation- and snapshot-pictures.

**H. C. K.—For snapshot-work in city-streets on bright days** the shutter should be set at  $\frac{1}{50}$  of a second, the stop at F/16 and the focusing-indicator at twenty-five feet. This combination of shutter-speed, stop and focus will meet all ordinary requirements of the camerist equipped with a hand-camera. Virtually, any hand-camera—thus set—becomes equivalent to a fixed-focus box-form camera, and is eminently suited to genre-photography in city-streets.

**W. J. R.—Films may be used after expiration-date,** but successful results cannot be guaranteed. However, if the film has been kept in a cool, dry place, and it is not too long after the expiration-date, you should obtain fairly satisfactory results. Do not use such a film to photograph any subject which cannot be duplicated readily. Such a film is an ideal one with which to experiment, and its use for this purpose is preferable for any serious work.

**S. B. A.—The advantage of a reflecting-camera** lies in the fact that the image of the subject appears on the ground-glass right-side up until the shutter is released. No focusing-cloth or tripod is required to compose each picture properly and to the best advantage. There are many excellent reflecting-cameras now on the market. Some foreign instruments fold into small compass and may be carried as easily as a small hand-camera. Most reflecting-cameras are equipped with focal-plane shutters and are used extensively to make speed-pictures. However, these cameras are equally well-adapted to all forms of amateur and professional photography. Owing to the remarkable efficiency of the focal-plane shutter, the use of an anastigmat lens is virtually required to obtain satisfactory results. All reflecting-cameras are listed with high-grade lens-equipments. The selection of the lens depends on speed, focus and cost, and rests entirely with the individual camerist and his requirements.

**K. Y.—One way to mount pictures with paste** is to obtain a large piece of plate-glass, collect the prints from the wash-water and place them face down on the glass—one on top of the other. Then apply the paste to the topmost print with a large brush—being careful to cover all corners thoroughly—lift the print from the pile and mount it. Continue to do this until the last print is reached. If the pile is not moved the paste will not reach the picture-side of the prints.

**O. C. M.—Horizontal scratches on roll-film negatives** are sometimes caused by trying to twist the paper more tightly around the spool after removing it from the camera. If, in addition, small particles of emulsion become loosened during the operation of twisting, they are apt to tear long, deep gashes in the celluloid base of the film. Such abrasions cannot be removed satisfactorily by retouching. Whenever possible, use a roll-film camera that is equipped with some form of tension spool-holder. This device prevents the film from unrolling faster than the winding-key is turned. In any event, it is far better to wrap up a loosely wound roll in heavy manilla paper than to try to twist the black paper more tightly around the film. Attention to this matter is of the greatest importance.



## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

**F. S. P.**—Your home-portrait is gracefully posed and well lighted — altogether a commendable effort. Unfortunately, the background is a wall of the room of which the wall-paper is objectionable by reason of its conspicuous pattern. It would be better had you used a temporary background consisting of a plain shawl, or one of the many amateur backgrounds which you can purchase for a small sum from any photo-dealer. In your case, the sitter or model was too near the wall, with its prominently decorated wall-paper. By moving the sitter farther away, and if not using too small a stop, the objectionable pattern of the wall-paper would have been thrown out of focus — if not entirely obliterated.

**F. S. D.**—A very well-arranged group of children. The doll furnishes an adequate center of interest, and the children seem entirely unconscious of the camera. A trifle longer exposure would have given you better detail in the white dresses and lessened the extreme blackness of the shadows.

**C. T. P.**—You have placed your camera too near the sitter for good results. The knees and feet are a trifle blurred, and the latter much too large in proportion to the head. A small camera is hardly adequate for this kind of work.

**G. W. F.**—The moon in your night-scene is too large, too sharply outlined, totally white, absolutely flat and without detail to look natural. Look at the moon carefully next time, and then at the sky and the

surrounding landscape. You will then try to produce in your picture a moon quite different from the first one. A good way to introduce a natural-looking moon into a night-picture is described elsewhere in this issue.

**P. C. N.**—Your picture has the appearance of an enlargement from the center of a more extended view. It lacks foreground and the plane values are poor.

**S. A. B.**—In making your interior-view, the camera was placed too low. Your room has no ceiling, and the pattern of the carpet is the most prominent thing in the picture. The camera should be placed at the height of a person's eyes when seated, to give proper perspective.

**W. A. K.**—The obtrusive poles are the greatest drawback to an otherwise pleasing road-view. Those in the distance blend with the trees inoffensively, but those in the right foreground are hopeless. The only

remedy now is to trim about one inch from that end. In making the picture, a viewpoint farther to the left would have been better, as this would have made possible the exclusion of the near-by poles without cutting the roadway.

**F. J. S.**—This is one of the frequently seen prints that include two pictures. The bridge, with its reflection in the water, and the curving line of the left bank, is one good composition; the group of cattle under the tree on the right bank makes a second very nice picture. As it is, the eye is uncertain which of the two to look at. The interest is divided.

**M. A. S.**—Your "Girl at Window" has many good qualities but it is poorly spaced. The side of the window divides the space vertically into two exact halves, and as the girl faces the edge of the print, her back and the edge of the piano complete this line. The piano and accessories in the right half add nothing to the picture, and, therefore, are

better cut off. Then trim at the bottom of the window-shade and you have a good figure, well-lighted and spaced.

**C. H.**—Your still-life can be greatly improved if you will reverse the order of clear definition by making the principal object — the vase with flowers — more distinct and giving it better illumination.



A NICE DRIVEWAY

A. S. WORKMAN

THIRD PRIZE — BEGINNERS' CONTEST



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

| *These figures must be increased up to five times if the light is inclined to be yellow or red.<br><sup>†</sup> Latitude 60° N. multiply by 3;<br>55° × 2; 52° × 2; 30° × $\frac{3}{4}$ .<br><sup>‡</sup> Latitude 60° N. multiply by 2;<br>55° × 2; 52° × $\frac{1}{2}$ ; 30° × $\frac{3}{4}$ .<br><sup>§</sup> Latitude 60° N. multiply by $\frac{1}{4}$ ;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .<br><sup>§</sup> Latitude 60° N. multiply by $\frac{1}{4}$ ;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ . | MONTH AND WEATHER  |                |                |               |               |                |                |                |                  |               |                           |                |                |               |               |                   |                |                |               |                  |
|--|--------------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------|------------------|---------------|---------------------------|----------------|----------------|---------------|---------------|-------------------|----------------|----------------|---------------|------------------|
|  | JAN., NOV., DEC. † |                |                |               |               | FEB., OCT. ‡   |                |                |                  |               | MAR., APR., AUG., SEPT. § |                |                |               |               | MAY, JUNE, JULY § |                |                |               |                  |
|  | Bright Sun         | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun     | Hazy Sun       | Diffused Light | Dull             | Very Dull     | Bright Sun                | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun        | Hazy Sun       | Diffused Light | Dull          | Very Dull        |
|  | 1                  | 2              | 3              | 4             | 5             | 1              | 2              | 3              | 4                | 5             | 1                         | 2              | 3              | 4             | 5             | 1                 | 2              | 3              | 4             | 5                |
| 11 A.M. to 1 P.M.  | $\frac{1}{32}$     | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{32}$ | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$    | $\frac{1}{2}$ | $\frac{1}{50}$            | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{1}{60}$    | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$    |
| 10-11 A.M. and 1-2 P.M.  | $\frac{1}{25}$     | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{1}{2}$ | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$    | $\frac{1}{2}$ | $\frac{1}{40}$            | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{60}$    | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$    |
| 9-10 A.M. and 2-3 P.M.   | $\frac{1}{12}$     | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{1}{2}$ | $1^*$         | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$    | $1^*$         | $\frac{1}{40}$            | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{50}$    | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$    |
| 8-9 A.M. and 3-4 P.M.  |                    |                |                |               |               | $\frac{1}{5}$  | $\frac{1}{2}$  | $1^*$          | $1\frac{1}{2}^*$ | $3^*$         | $\frac{1}{30}$            | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{3}$ | $\frac{1}{2}$ | $\frac{1}{30}$    | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$    |
| 7-8 A.M. and 4-5 P.M.  |                    |                |                |               |               |                |                |                |                  |               | $\frac{1}{20}$            | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{1}{20}$    | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$ | $\frac{2}{3}$    |
| 6-7 A.M. and 5-6 P.M.  |                    |                |                |               |               |                |                |                |                  |               | $\frac{1}{15}$            | $\frac{1}{8}$  | $\frac{1}{2}$  | $\frac{3}{4}$ | $1^*$         | $\frac{1}{15}$    | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{3}{4}$    |
| 5-6 A.M. and 6-7 P.M.  |                    |                |                |               |               |                |                |                |                  |               |                           |                |                |               |               | $\frac{1}{10}$    | $\frac{1}{5}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1\frac{1}{2}^*$ |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky ;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground ;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground ;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground ;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade ;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.**

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

For other stops multiply by the number  
in the third column

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

|           |       |       |
|-----------|-------|-------|
| U. S. 1   | F/4   | × 1/4 |
| U. S. 2   | F/5.6 | × 1/2 |
| U. S. 2.4 | F/6.3 | × 5/8 |
| U. S. 3   | F/7   | × 3/4 |
| U. S. 8   | F/11  | × 2   |
| U. S. 16  | F/16  | × 4   |
| U. S. 32  | F/22  | × 8   |
| U. S. 64  | F/32  | × 16  |

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16×4=1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16×1/2=1/32. Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.

Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.

Anso Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Imperial Special Sensitive  
Seed Gilt Edge 30  
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.

Barnet Red Seal  
Cramer Instantaneous Iso  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.

American  
Anso Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film

Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.

Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.

Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.

Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.

Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.

Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## A Simple Device for Timing Seconds

WERE I to write a book on my photographic reminiscences, I should be inclined to include the following experience.

It was away back in the early eighties when, being in Paris, I went to see an interesting scientific experiment that was then being conducted in the Panthéon. From the interior of the dome was suspended a pendulum, about 63 meters, or a little over 200 feet, long and provided with a heavy and sharply pointed steel-bob, which, swinging slowly back and forth, eight seconds to each vibration or beat, produced well-defined lines in the layer of fine, white sand that covered the inner surface of a huge concrete bowl on the floor immediately under the dome. As explained to me, the experiment originated with Foucault (1851) — the same Foucault who perfected the process of Daguerre and Niépce, known as the "daguerreotype process," and that these oscillations gave the kinetic measurement of gravity, thus helping to determine the oblateness of the earth in terms of the law of decrease of gravity, from the poles to the equator, also the mean density of the earth. I also learned that a meter was not an arbitrary measurement of length, but was, in fact, a  $\frac{1}{10,000,000}$  part of the distance from the pole, along the earth's surface, to the equator, also that the half-beat or single swing of an ordinary pendulum, one meter long, was approximately one second.

Several years afterwards, when, with the introduction of dryplates, amateur photography became a popular pastime, I improvised for my personal use and, later, for my friends, a plummet or pendulum consisting of a piece of fishline attached to a half-inch round leaden bullet, the distance from whose center to a knot tied in the cord was  $9\frac{3}{4}$  inches. Holding the cord by the knot, and letting it swing back and forth, I produced beats or intervals exactly one-half second in duration. It was a simple, inexpensive device, by means of which I learned to count seconds accurately without any assistance or guide. Those who are interested are welcome to this little hint.

## A Kodak-Display

As I was surveying the optical goods displayed in one of Sellum's windows, in Bromfield Street, one day, at Christmas time, I was conscious of an individual bestowing a similar attention on a display of Kodaks and things in the other window. The stranger seemed to sway gently to and fro, as if he were trying to adjust his vision with an ill-fitting pair of glasses. Convinced that something was not just right with the man, I decided to await developments. In a few moments I saw him clap a hand to his forehead and mutter something unintelligible, but continuing to look steadily in the same direction. I quickly ran to his assistance, just as he was about to reel backwards. As I stopped him from falling, I noticed that he appeared to be looking into the show window, but in a dazed manner, his head turning slightly from side to side as if something had hypnotized him. I followed the man's gaze and at once understood the cause of his bewilderment. On a circular rotating glass-shelf were arranged six small folding cameras opened to display their fittings and ad-

justments. Tags with the sales-price were attached to the cameras, but the rapid circular motion of the table, with its attractive freight, made an examination impossible. However, the glittering effect of the nicked camera-parts, coming and going, must have exerted a sort of hypnotic spell over the interested onlooker, who, slowly regaining his composure, thanked me and entered the store, no doubt intending to inspect a camera amid more favorable conditions.

## A Case of Mysterious Alacrity Or, Going Some!

THE many readers who have enjoyed reading the article on how to produce brilliant negatives, by "Fr. C.," translated from the German in *Photo-Woche*, and printed in *Photo-Era* for November, 1916, may be pleased to know that the author is Carl Frank, of München-Gladbach, Germany.

How this information came to us is not only strange, but somewhat uncanny. Listen! The November issue was delayed, and copies to subscribers did not leave the Boston post-office until about October 26. Then followed copies for subscribers and agents in Europe, exclusive of Germany and Austria-Hungary, to which countries none had been sent since last summer. Make allowance for transportation of U. S. mail, with its present, well-known handicaps, to Europe, and you will appreciate the point of the following incident!

Early last January, I received a postcard from the editor of the *Photo-Woche*, at Wilhelmshorst (near Berlin), dated November 26, 1916 — a little over three weeks after the magazines (third-class mail) had left the American port and been passed by the censor! The message on the German postcard referred in courteous and complimentary terms to the article in November *Photo-Era*, and gave the author's name and address in full. What were the agencies by which our esteemed and accomplished cotemporary received a copy of the Boston publication in so short a time? Or was the contents of that issue conveyed to him by wireless?

## Ghirlandaio Sets a Good Example

A PROMINENT portrait-photographer writes me that, whereas he appreciated my criticism of "sightless eyes" in profiles, he didn't think that portrait-painters did any better than photographers in that respect.

Now, although it is the easiest possible thing to have the iris and even the pupil of the eye show in a side-view of the face — as I have pointed out several times — painters are more careful than the average photographer. As luck will have it, there is a beautiful example of my contention in the January (1917) number of the *Ladies' Home Journal* — a superb reproduction in colors of Domenico Ghirlandaio's portrait of Giovanna Tornabuoni. The fair sitter is represented as exactly at right angles with the artist (or, in imagination, with the camera, if you will), and both the pupil and the iris are distinctly visible.

With the prospect of times that are destined to try men's souls it is fervently to be hoped that our beloved hobby will continue to engage the attention of all devotees throughout this great land.



## OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE initial picture this month—repeated on page 119—is of the world's most famous mountain-peak, the Matterhorn, and owes its origin to Donald McLeish, one of the foremost of English alpine photographers. The present European War has so embroiled one country after another that it would not be astonishing if brave little Switzerland had to place herself on the defensive, in which case her mountain-strongholds would play an important part. Her passes are said to be strongly fortified, and it is not improbable that her mountain-peaks, such as the Wetterhorn, the Jungfrau and the Matterhorn, are also prepared to resist an invading army. The guardian of the Zermatt Valley presents an aspect different from what he is usually represented, because seen from a point across the Italian border; yet he is picturesque and impressive in the extreme, as he rises majestically from the nestling forest of Breuil, which the artist has selected as an eminently artistic setting. The mountain rears its head at an elevation of nearly 15,000 feet and, seen from whatever point, always presents an inspiring spectacle.

As a photograph in the nude, and a representation of physical perfection and superior intelligence, the portrait of the little girl, frontispiece, is a masterpiece. The child, despite its rare physical beauty, is known as "Baby Jane," the mother appearing to eschew such affected and now somewhat cheapened names as "Gloria," "Sunshine," and "Sibyl." Jane—who will be four years old next April—has served as model for a beautiful paper doll, which her mother has designed and patented. It is destined to become a popular toy among children of all classes. Data: Home-portrait, Mrs. Offutt's apartments, New York City, November, 1916; electric light combined with daylight; Eastman 8 x 10 Home-Portrait camera; 13-inch Cooke; at full opening; dryplate; pyro; 8 x 10 sepia print; background, evidently a portable professional one, appears a little incongruous for an indoor-portrait—but why cavil in the presence of the little fairy?

H. C. Mann, by his frequent appearance as a delineator of dune-land, has come to be known as a specialist in that field of *al fresco* photography. He certainly succeeds in forming spectacular and happy combinations of sand-banks and cumulous clouds. One of his latest achievements in that direction appears on page 111. The picture is well proportioned, with a well-filled sky. Data: Afternoon; good light; 8 x 10 Century camera; 12-inch Goerz Dagor; stop, F. 6.8; 3-time B. & J. color-screen; Hammer Non-Hal. Ortho; pyro; 8 x 10 Iris Artura print.

There is no denying the fact that Mr. Churchill is master of his subject—human life in the Ghetto. Pages 112-115. He has surely caught the spirit of child-life among the New York aliens, and, happily, the pleasant side of it. With quick perception of the artistic possibilities of a scene or episode, he has achieved pictures of convincing merit, such as an artist with palette and brush might view with envy. This remarkable series of photographs will repay the closest study by camerists, painters and laymen.

The picture of Louise Sterling, page 116, who is in dancing attitude, is reported to be with Marshall Hall—a recent addition to the forces of interpretive dancing. Miss Sterling has appeared in a number of

society entertainments. The dancer has been caught by the camera in an exceedingly graceful pose, which, however, could have been only a fraction of a second in duration. The lighting is not well distributed, and is probably very intense, to enable the photographer to make a very quick exposure. The picture also suffers from a lack of space at the right. The original print was received by PHOTO-ERA in a very abbreviated condition, but the graceful lines of the dancer seem to warrant the publication of this interesting picture. No data at hand.

Though made before the advent of the dryplate and inter-lens shutter, the photographs of icebergs, by William H. Pierce, pages 120 and 121, merit unstinted admiration. They display pleasing effects of sunlight and shadow, with many a curious and fantastic figure in high relief—noticeable, particularly, in "The Terror of the Deep."

"Among the Oaks," page 123, stands forth as an uncommonly successful picture of tree-photography. The color-values are delightfully true. There are no opaque masses, the shadow in the foreground being especially clear and transparent. Data: October, 3 p.m.;  $2\frac{1}{4}$  x  $3\frac{1}{4}$  Graflex camera; 6½-inch lens, at F/11;  $\frac{1}{30}$  second; enlarged on Azo, Grade F; picture was made on the site of the Battle of Tippecanoe, and shows one corner of the State Park, which is preserved as a cemetery for those killed in this battle.

With his discriminating eye and ready equipment, W. T. Starr captured an unusually picturesque scene of a shipwreck off the Maine coast. Page 125. The picture has the added merit of artistic feeling and superb workmanship—altogether an harmonious and well-ordered composition. Data: December, noon;  $3\frac{1}{4}$  x  $4\frac{1}{4}$  Graflex camera; 7-inch Verito; Standard Ortho; pyro. The sea and ships are always attractive pictorially; especially so with the addition of seagulls in flight.

The swirl and swish of a dashing wave have been caught at the psychological moment by James Allan, page 128. The picture is vigorous in color, also admirable in proportion and balance. Data: August, 1916, 7.30 a.m.; bright light; 4 x 5 Reflex camera; 7-inch Goerz Celor; stop, U. S. 4; Cramer Inst. Iso; Duratol; enlarged on B. & J. Rexo paper.

The head of a young girl by Mr. Bushong, a former president of the Photographers' Association of New England, page 131, is one of striking beauty. Data: December, 1915, 11 a.m.; bright day; combination window and skylight; 14-inch Voigtländer & Sohn's Heliar, F/4.5 series; used at full opening; 1 second; Seed Gilt Edge; pyro, A. B. C.; 8 x 10 Haloid print. Picture was awarded first prize for Massachusetts at 1916 convention of the P. A. of N. E.

"Lingering Winter," page 133, is one of the best artistic efforts of William Ludlum, Jr. What is usually represented as a strong highlight—by the average worker—is here kept in a consistently quiet tone. The values of the tree-trunks, the ground covered with last year's grass and fallen leaves and the remains of the last snow-fall have been rendered with adequate fidelity. The stereoscopic effect is quite realistic—perhaps, a trifle too much so—marks the division of planes and emphasizes the atmospheric perspective. A pity that the tree-trunk at the left hugs the margin



of the print. Data: 5 x 7 Premo camera; Velostigmat, F/6.3; stop, F/32; 1 second; Orthonon plate; pyro; 5 x 7 Cyko soft print; duratol.

Mr. Field's "A Southern Dream," page 134, pleases by reason of its soft atmospheric touch, true up-hill perspective and altogether admirable artistic proportions. Data: April, 7 A.M.; bright light; 9-inch soft-focus lens; stop, F/4.5; at full aperture; color-screen; pyro soda; Iris E smooth print.

### Advanced Workers' Competition

In "The Little Questioner," page 137, there is evidence of spontaneity and truth. It is a little episode in the home that is of common occurrence. The composition is natural and artistic in its pyramidal design, the handsome but unobtrusive vase breaking up the rigid form of the fireplace and uniting the figures of the mother and child. All is admirable, except that the two figures are in too high a key to be absolutely truthful—not so much the costumes, perhaps, but the flesh tints. In this respect, the picture by T. E. Hall-dorson, which was accorded a complimentary honor—because it was not entered for competition—and which appeared on the front cover of the February issue, is exemplary. It is just as easy to impart the right color-value to the face and hands of the human figure by flashlight as by daylight illumination. It is simply a matter of employing the proper apparatus, and of developing the plate or film. Data: 8 x 10 view-camera; lens stopped down to F/16; portable flashbag; Hammer plate; pyro; print on Azo II.

Mr. Hawley's interior, page 139, *per contra*, presents a subject of no strong contrasts, and yet it is vigorous in treatment. It is a typical camp, with objects peculiar to it, but there is no harsh note in the entire harmonious composition. Artistically and technically, the picture is a success. Data: 6½-inch B. & L. anastigmat; stop, F/8; Victor Flashpowder; 4 x 5 Wellington Extra Speedy plate; pyro-acetone; enlarged on Azo grade II; toned in hypo-alum.

The character-study, page 140, by the well-known cartoonist-photographer-impersonator, W. R. Bradford, shows what is likely to become of people of pessimistic tendencies. The history of this poor man, in its harrowing details, formed the larger part of the data sent to the Editor by the artist; but, for obvious reasons, they have been blue-penciled. Data: Struss Pictorial Lens, F/8; Wratten & Wainwright Panchromatic plate; Rytol; electric flashlamp; self-posed; exposure, stepping on bulb (result of frenzy), operating shutter and flash; enlarged on Platora Professional, Matte; cell-window was sheet of light-buff paper with bars painted on, and pinned to mahogany-colored background.

### Beginners' Competition

MR. BAXTER'S boy on sled, page 143, bears the earmarks of an unpremeditated, quite impromptu snapshot, resulting in a perfectly spontaneous pyramidal pictorial design and, all the more, successful. The contrasts are sharp, but justifiable and effective. The face has been rendered truthfully as to value and expression, and there is no room for criticism. Data: December, 11 A.M.; dull light; snowing hard; 4 x 5 Speed Graphic; 7½-inch Carl Zeiss lens; stop, F/4.5; at full aperture; ⅓ second; Premo Film-Pack; Eastman film-tank; Artura Carbon Black enlargement.

H. B. Randolph's genre is one of those many delightful scenes of child-life that invite the camerist. The composition, though not free of faults, is quite natural and pleasing. The values are right, and there are no

disagreeable notes and no opaque shadows. Data: August, 5 P.M.; in shade of house; 5 x 7 Graflex; 8¼-inch B. & L. Zeiss Tessar Ic; at full aperture; ⅓ second; hydro-metol; print on Montauk Bromide No. 9; developed with hydro-Kathol.

Mr. Workman's road-view, page 147, is very attractive in its thoroughly artistic interpretation. The treatment of the light and dark masses is consistent and pleasing, and, again, there is an absence of densely black shadows, which workers should avoid if possible. Data: Seneca Anastigmat at F/6.8; ⅓ second; 3-time filter; Seed L. Ortho; Cyko print, through very thin sheet of glass—an excellent and successful dodge.

### The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman—an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideal-ity. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skilful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker—professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the publisher of PHOTO-ERA on receipt of \$2.00 each.



THE publishers of PHOTO-ERA have decided to raise the subscription-price of that attractive monthly from \$1.50 to \$2.00, and the single-copy price from 15 cents to 20 cents. Darn the h. c. of 1, anyway.

*The Amateur Photographer's Weekly.*



## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### Cleveland Photographic Society

WE have been informed that the Cleveland Photographic Society has completed its new club-rooms, which are exceptionally well-equipped with the latest photographic-apparatus. The rooms are divided into three distinct sections. The front section is the studio for the practice of portrait- and commercial-photography; the middle one is the assembly- and exhibition-room for meetings and club or out-of-town exhibitions; the third or rear one contains the workrooms, which are subdivided into six sections, including one printing- and enlarging-room, three individual developing-rooms, one loading-room and one general workroom. We regret that limited space does not permit a more detailed description of the equipment in each room. However, it may be stated that nothing has been omitted which would add to the efficiency and comfort of every member. The Cleveland Photographic Society has shown marked progress in its two years of existence, and the semi-annual exhibits are attracting wide-spread interest. The official opening in the new club-rooms was held Wednesday evening, January 17, and from the enthusiasm shown by the members the Society should prove to be a pronounced success.

### Toronto Camera Club

THE Fourteenth Salon, Twenty-Sixth Annual Exhibition of the Toronto Camera Club, will be held May 2 to May 16, inclusive, 1917, in the Art Museum of Toronto. This exhibition is intended to bring together a thoroughly representative collection of all that is best in pictorial-photography, and is international in character. It is open to members and non-members alike without distinction. The committee welcomes the friendly coöperation of photographers — at home and abroad — in its efforts to make the forthcoming exhibition a worthy successor to those which have preceded it, and a true reflection of the present position of pictorial-photography. For entry-forms and other information, address Albert Kelly, Secretary, 2 Gould Street, Toronto, Canada.

### The New Mural Decorations by John Sargent at Boston, U. S. A.

AMONG the important achievements in present-day American art is the series of paintings by John Singer Sargent, in the Public Library of Boston, U. S. A. These remarkable paintings, by one of America's most distinguished painters, are the object of profound interest among art-lovers throughout this country. Persons who intend to pass the summer or a brief season in New England, this year, should not neglect to visit Boston's magnificent Public Library, with its important works of art, and inspect Mr. Sargent's masterpiece in mural decoration.

An appreciative and illuminating description of these paintings, together with a number of halftone illustrations, by Frederick W. Cohn, art-editor of the *Boston Herald*, appears in the current issue of the *American Magazine of Art*. Its perusal by those interested will form an excellent preparation for the enjoyment of the above-mentioned pictures.

### Exhibit of Paintings by John J. Enneking<sup>1</sup>

THE forthcoming memorial exhibition of paintings by the late John J. Enneking, the distinguished American landscape artist, which will be held at the Boston Art Club for two weeks, beginning March 5, 1917, will be an event of extraordinary importance. It will draw art-lovers from New England, from many Eastern states and also from Canada. Amateur photographers are going to be specially interested in this exhibition, because the principles of pictorial photography were not only appreciated by Mr. Enneking, but he sympathized greatly with the endeavors of amateurs to make real pictures. He has talked to the members of the Boston Camera Club on several occasions, and was always ready to give advice to individual photographers. He was a frequent visitor to the offices of PHOTO-ERA, where he took particular delight in examining the pictorial efforts of the amateur and professional photographer. In his own works, he has exemplified the principles of simplicity, unity and harmony, together with a degree of emotional expression excelled by no landscape painter of the past or present.

Artist-photographers should embrace this opportunity to view this superb collection of paintings by this great master. Admission is free. See advertisement in this issue.

### The New York Institute of Photography

THE New York Institute of Photography, conducted by Emile Brunel, for many years at 22 West 23d Street, has moved recently into larger quarters, in the Herald Square Building, 141-145 West 36th Street, New York City. This school is a regular beehive, and, during business-hours, one meets students engaged in every important branch of photography — art, commercial, motion-picture and photo-engraving. Mr. Brunel is a graduate of the art-schools of Paris, and operates studios in New York, Boston, Philadelphia and Detroit. Mr. Samuel Falk makes a very industrious and capable secretary and general manager.

### Apologies to the British Journal

By an accident — not an oversight — the authorship of the admirable article, "Optical Glass," a brief historical review, reprinted in PHOTO-ERA, January, 1917, was omitted. It is a pleasure to state the source is the *British Journal of Photography* of November 10, 1916. PHOTO-ERA prides itself in unfailingly giving credit to all quoted articles and paragraphs, and it is with regret that when its readers derived satisfaction and profit from reading the above-mentioned paper, they were deprived, for the time, of the knowledge of its actual source.

### The Doings of Clubs and Societies

ADVANCE-NOTICES of the activities of progressive photographic clubs and societies will be printed in PHOTO-ERA, provided such notices are received in time.

To facilitate this, secretaries should send that information to PHOTO-ERA at least as soon as it is sent to their printers. Often it reaches PHOTO-ERA too late to be of any use.



## The Eastman School of Professional Photography

THIS permanent institution, visiting the great cities of the Union once a year, is as welcome as it is indispensable. It held forth in Boston February 6, 7 and 8, at Tremont Temple, occupying two halls—one for lectures and demonstrations, and the other for the exhibition of prints and illuminated negatives. The program was of the usual high excellence, the speakers and demonstrators being authoritative and expert. This superbly educative series of object-lessons had been announced in advance, and drew visitors from all parts of New England, adjoining states and the provinces, numbering about 700, who displayed a keen interest in all the proceedings. A number of wide-awake amateurs of Greater Boston profited by this unusual opportunity to hear the latest word in practical photography. The program was as follows:

First Day: Fundamental facts concerning sensitive material, chemicals and their action, methods of development, modern darkrooms and their illumination (A. B. Cornish); What the commercial photographer needs in equipment (Harry Devine); Business—The money-making possibilities of practical bookkeeping (Milton Waide); Commercial photography—How to secure best results by preparation of objects to be photographed, such as stoves, metals, glassware, pottery, and salesmen's samples, such as candies, cigars, etc. (Harry Devine); Demonstration of dry-mounting (A. B. Cornish); Lenses—The things you should know made plain; the things that confuse you, omitted (Dr. E. C. Kenneth Mees); Principles of development as applied to papers (Milton Waide); Portraiture in and at the home (A. B. Cornish).

Second Day: The most important thing in photography—the print your customer pays for and by which your ability is judged (Milton Waide); After-treatment of negatives, illustrated (A. B. Cornish); Business-advertising (Milton Waide); Portraiture in the studio (A. B. Cornish); Commercial photography (operating) (Harry Devine); Color-separation applied to practical photography (Milton Waide); Enlarging—A practical demonstration of methods, equipment and paper (Milton Waide).

Third Day: Toning of developing-papers (A. B. Cornish); Business, selling (Milton Waide); Portrait and commercial finishing—finishing portraits and commercial prints from negatives made at the school—mask-cutting, embossing, vignetting, loose mounting, titling, trimming and spacing (Milton Waide); Proofs and proof retouching—does it pay? (A. B. Cornish); Money-making possibilities (Milton Waide).

### Relief for Consumers of Paper in Sight

WHATEVER good may have been done by governmental boards to correct certain economic and other evils, it is to be hoped that the new Federal Trade Commission, appointed by the President to ascertain the real cause of the present extortionate prices of printing-paper, will arrive at the bottom of things.

It is said that what goes up, must come down. Not so with prices of commodities, always. It is sometimes a question how much the public will stand when prices are advanced arbitrarily and without a valid reason. When prices of a manufactured article are increased, but out of all proportion to the scarcity or increased cost of the raw material, the consumer has a right to complain, and to seek means to establish prices that are consistent with existing conditions.

Naturally, the aggrieved citizens look to the government for relief and protection, and the publishers of

newspapers and magazines, who consume vast quantities of paper manufactured in the United States, await with eagerness the result of Federal inquiry and—consequent action.

### Photographic Lenses Commandeered

ACCORDING to the *British Journal of Photography*, of January 19, the Ministry of Munitions—under the Defence of the Realm Act—has commandeered anastigmat and other lenses that meet the following requirements. The order applies to F/4.5 anastigmats of 8- to 12-inch focus; to F/6 anastigmats of 18- to 24-inch focus; to F/11 anastigmats and rapid rectilinear lenses of 22- to 26-inch focus; and to F/8 lenses of 30- to 72-inch focus.

### Dr. Mees in Demand

DR. C. E. KENNETH MEES, Director of the Eastman Research Laboratories, at Rochester, N. Y., was in great demand when on his recent visit to Boston. He gave his lecture on lenses at the Worcester Polytechnic Institute; also at the Eastman School of Professional Photography, which was conducted at Boston, at the time; lectured before the Massachusetts Institute of Technology; spent an afternoon with Prof. Edward Pickering, of the Harvard Observatory, at Cambridge, Mass., and was the guest at a dinner given in his honor at the Boston Art Club.

### Uncle Sam's Inventions

ACCORDING to an esteemed English cotemporary, the people of the United States are responsible for two-thirds of the revolutionary and epoch-making inventions of the world. The annual report of the Secretary of the Interior, Mr. Lane, seems to furnish the ground for this statement. Of fifty great inventions, the oldest of which is that of dynamite, in 1867, the Americans claim thirty-six. These include celluloid, invented by Hyatt, in 1870; the transparent photographic-film, by Eastman, in 1888; and the motion-picture machine, by Edison, in 1893. As against this list, the rest of the world has only a paltry fourteen inventions, of which four are English and three are German, the latter including the invention of artificial alizarine.

Our English friend suggests that with equal partiality any nation could make up a list of inventions, leaving the others trailing behind.

### Photographic Dealers' Convention

THIS year the Photographic Dealers' Association of America will hold its annual convention, March 20, 21 and 22, at Detroit. The Hotel Tuller is to be the headquarters. Dealers from all parts of the United States are planning to attend. A new, interesting and practical display of photographic merchandise is promised by the manufacturers.

### The Life of George Eastman in Leslie's

THE most comprehensive, lucid and authentic account of George Eastman's life that has yet been written appeared in *Leslie's* of February 8, 1917. This article was written by B. C. Forbes, an authority, and fittingly describes George Eastman and his early struggles to achieve success. "It is a story containing all the elements of poverty and pluck, of plodding and perseverance, of hope and despair." That George Eastman is one of the foremost and truly successful captains of industry of the world is acknowledged by every fair-minded person.



## WITH THE TRADE



### The Wollensak Spirit for 1917

THE January-February, 1917, issue of "Lensology and Shutterisms," published by the Wollensak Optical Company, Rochester, N. Y., and edited by J. A. Dawes, is replete with good common sense and the right sort of optimism. We commend the attention of every dealer to the article "The Why of the List-Price." It answers the cut-price question clearly, forcibly and practically.



### A New Rexo Camera-Booklet

BURKE & JAMES, INC., of Chicago, have recently issued an attractive booklet which describes Rexo Cameras in detail, and introduces to the trade the new advertising-slogan, "Every Click a Picture." Judging from reports received, the new slogan is well-timed, and represents correctly Rexo camera-efficiency. The new booklet contains valuable information, and it may be obtained, free of charge, from Burke & James.

### A Remarkable Flashlight-Portrait

FEW portraits have brooked so much well-merited admiration as that of a young girl, "The Vision," that appeared in PHOTO-ERA for February, 1917. This picture was made in a professional studio on an 8 x 10 Eastman portrait film, with a 17-inch lens and 7 grains of Victor flashpowder. The small quantity of powder used, in view of the beautiful illumination obtained, caused many professional photographers to be skeptical. However, we have the positive assurance, which is equal to an affidavit, that 7 grains was actually the amount used. This speaks volumes in favor of the effectiveness of the compound — made by J. H. Smith & Sons Co., of Chicago.

### The Hiblock in Argentina

WE frequently receive reports complimentary to the excellences of the hiblock-system of color-photography, as placed upon the market by the Hess-Ives Corporation, of Philadelphia. The latest comes from one of the leading professional photographers in the Argentine Republic, South America, who states that he is making quite a success with the hiblock. He adds that he has even improved upon the original, making them upon porcelain where the pure white comes through and gives a very lovely, soft color. It is possible for the individual worker to achieve charming and permanent results with this system of color-photography. Each issue of PHOTO-ERA contains a statement from the Hess-Ives Corporation giving valuable and practical information on the successful application of their wonderful process.

### Photo-Era Subscriptions — A Stampede

THE increase from \$1.50 to \$2.00 per year for one year's subscription to PHOTO-ERA seems to have acted as an incentive rather than a deterrent; for during the middle and end of February — March 1 being the time-limit for the receipt of \$1.50 subscriptions — renewals came in thick and fast. Others who heard of the increased price, and fully intending to subscribe to PHOTO-ERA some time during the spring, also hastened to send in their order before March 1. It was, indeed, a regular stampede.

Not only this; we received an astonishingly large number of subscriptions, each from three to nine years! It seems as if these subscribers feared that PHOTO-ERA might yet advance to \$3.00 or, perhaps, even to \$5.00 per year, and would not care to take any chances. The month of February has proved, therefore, the most profitable period for subscriptions for PHOTO-ERA magazine that has occurred in its history.

The Publisher hopes sincerely that nothing may prevent him from maintaining the high standard of literary, illustrative and typographical merit. One thing is certain — he will leave nothing undone to satisfy his subscribers and advertisers. Also, despite the trying times, he will see to it that not one single dishonest advertisement, large or small, finds its way into the magazine. He hopes to continue the record of receiving no complaints, whatsoever, reflecting upon the integrity of an advertiser.

### Now Is the Time

WITH this issue PHOTO-ERA advances in price from \$1.50 to \$2.00 per year, and from 15 cents to 20 cents per copy. The expressions of approval received from all sides emphatically convince the Publisher that PHOTO-ERA possesses a powerful influence among amateur and professional photographers throughout the world. In view of this fact and the approach of the summer season, it should be apparent to all advertisers that *now is the time* to acquaint amateur and professional workers with the new goods to be placed on the market.





## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

**CHEMISTRY FOR PHOTOGRAPHERS.** By William R. Flint, Ph.D. 8vo, cloth. 205 pp. Price, \$2.00 net. Boston, U. S. A.: American Photographic Publishing Co.

With only one excellent standard book on photographic chemistry—but quite out of date—at his command, the practical worker will welcome the new work, by Dr. Flint, for it deals with modern chemicals, methods and problems, as applied to every-day photography. An early chapter is devoted to a dozen easy, practical experiments with photographic chemicals, which, if conducted by the student, will impart to him a knowledge of photo-chemistry that will be serviceable and of perpetual value. The author's analysis of various popular processes, printing and manipulation of the negative, are remarkably clear, and will enable the worker—be he amateur or professional—to perform his tasks with intelligence and greater satisfaction, and with more assurance of success than has been his wont. The practical value of Dr. Flint's book has been greatly enhanced by tables of chemicals, important formulae and other useful information.

Issued by the same publishers is Vol. 5 of the Practical Photography Series—**HOW TO MAKE ENLARGEMENTS**, by Frank R. Frappie, S.M., F.R.P.S. This handy 8vo book is published, in cloth, at 50 cents; in paper covers, at 25 cents.

This is a revised and enlarged edition of this admirable little work on a popular practical subject, which the author has treated thoroughly from the very beginning to the final word. Every desirable method, form of apparatus, permissible dodge and type of lens have been mentioned, and in so concise a form that even the tyro cannot help attaining highly satisfactory results, if he follows the advice given.

### Some New Facts About Amidol

In these days when the chemical situation is so abnormal, and certain standard developers are hardly obtainable at any price on the American market, the virtues of amidol are truly worth investigating.

The writer wishes to present some interesting and useful reactions with amidol for the benefit of fellow-workers. It is a developer suitable for every process in which elon or metol has been used. At the same time, it is as near a universal developer as has been invented.

The investigator will find that it can be used for films, plates, bromide-papers and gas-light papers, as it is stainless, rapid in action, gives any shade of tone, with brilliant highlights and unlimited detail and softness.

The following methods of working this developer will help to attain the best results.

First, dissolve the sulphite of soda in luke-warm water, to which add one-half as much sodium bi-sulphite as your formula calls for amidol. Lastly, add the amidol. Your solution will then be clear and colorless, and will keep almost indefinitely.

Amidol may be used for tank-development when prepared in the manner described above; it will give plenty of contrast and fine detail. For plucky and clear-working results the writer recommends the following:

|                          |                     |
|--------------------------|---------------------|
| Water .....              | 128 ounces          |
| Sodium sulphite .....    | 3 ounces            |
| Sodium bi-sulphite ..... | 2 drams             |
| Amidol .....             | $\frac{1}{2}$ ounce |
| Potassium bromide .....  | 20 grains           |

More contrast may be obtained by increasing slightly the sodium sulphite; but care must be taken not to block the highlights, as the sulphite serves the function of the accelerator in this developer. The writer has used a solution like the one above compounded continuously for two weeks, and has strengthened same slightly from time to time without its showing any signs of oxidation.

Upon the addition of pyro and carbonate of soda in the following manner, a curious effect is noted, and the writer invites an explanation from fellow-workers.

(A) Add 1 ounce of pyro to above stock-solution.

(B) Add 2 drams of carbonate of soda to the amidol-pyro solution above.

(C) Add 2 drams of carbonate of soda to B.

(D) Add 2 drams of carbonate of soda to C.

Make an exposure and develop a negative in each of the solutions mentioned under A, B, C, D. Keep on adding carbonate of soda in two-dram lots to the above stock-solution, and make a test-exposure and develop same in the resulting solution. It will be found that the speed of development is increased proportionately to the amount of carbonate added, and that the time of exposure can be reduced *proportionately*.

The maximum speed and minimum exposure will be attained when about two ounces of carbonate of soda have been added to the above stock-solution. More potassium bromide may be required as the carbonate is added. When using the above stock-solution on gas-light papers the writer has found that the exposure may be cut to one-fourth the original time. Can it be that we have found an ultra-sensitive developer that gives all the softness and speed of metol and, at the same time, is more sensitive to the action of light than any developer yet discovered? Amidol-pyro does not stain the fingers badly when in combination, and does not oxidize as rapidly as when pyro is used alone.

Carbonate of soda added to amidol solution *alone* does not show a marked accelerating effect, and—in experiments conducted by the writer—showed increase of sensitiveness only when used in combination with pyro. My further experiments have proven that the amount of pyro and sulphite of soda can be increased to about four times that given in the above formula without neutralizing the peculiar effects noted. No benefits were obtained except, perhaps, a slightly warmer color in the negatives where the pyro was increased, and more softness and less oxidation where more sulphite was added.

The writer cautions experimenters to start along the lines of the formulae laid down, as only failure will result if all the particulars above-mentioned are not observed. Amidol-Johnson's, E. K. Tested sodas and Seed's 27 Guilt Edge plates were used in making the experiments.—E. E. ISENHUTH.

### Likes Increased Price of Photo-Era

ALLOW me to congratulate you on your decision to raise the price of PHOTO-ERA rather than impair its quality. An art-magazine printed in a slovenly style had better go out of business.—HENRY W. JONES.



## RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



A PHOTOGRAPHIC Camera bearing patent No. 1,214,016 has just been granted to Alfred Dawson, of Greenhithe, England, in which is claimed: In a multi-plate photographic camera, a combined light-transmitting and reflecting element having a toric-figured surface to equalize the transmitted and the reflected image.

Frank C. Hamilton, of New York, N. Y., has just received patent No. 1,214,301, on a Shutter for Motion-Picture Projecting Apparatus Having Interlocking Parts and Means for Maintaining the Parts in Assembled Relation and for Mounting the Shutter on a Projecting Apparatus.

Patent No. 1,213,925, on Photographic Paper, has recently been issued to Alfred C. McCloskey, Philadelphia, Pa., in which is claimed: Photographic paper for producing prints having dark images on light grounds from tracings and the like, provided upon the face with a light-sensitive coating containing ferric salts, and provided upon the back with a coating containing ferrous salts and removable by the clearing-solution, whereby the paper after printing can be immersed in or wet on both sides with the appropriate solutions tending to stain it, and, when finished, will present a clean back, free of discolorations or stains.

A Lens-Focusing Device, invented by Joseph Goddard and William S. Hutchings, of Rochester, N. Y., has been granted patent No. 1,214,453.

Patent 1,214,250, on Photographic Shutter, has been granted to Andrew Wollensak, of Rochester, N. Y.

A Photographic-Film Support has been patented by Charles F. Barr and William R. Miller, bearing No. 1,214,408. The inventors reside in Winchester, Va.

Leo Gaumont, of Paris, France, has just invented and patented an apparatus for Taking Kinematographic Views in Colors, the same bearing No. 1,213,184.

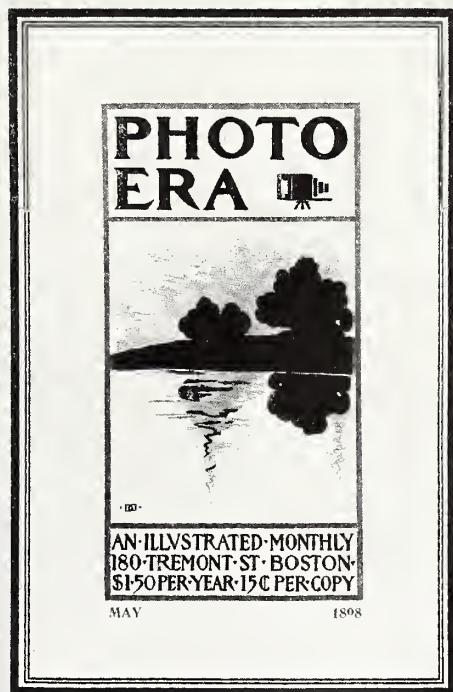
Patent No. 1,213,514, on a Photographic Film, has just been granted to Frank W. Lovejoy, of Rochester, N. Y., in which is claimed the following: A continuous strip of photographic film formed in a single integral piece and comprising a plurality of adjoining picture areas adapted to receive a series of successive exposures, one of the longitudinal edges of the film being provided with a plurality of distinguishing-marks, one of which is opposite and individual to each picture area, and arranged between said area and the margin of the strip, the marks being constituted by protuberances formed up from the material of the film and successive marks consisting of numerically successive groups of protuberances, all arranged in alignment and parallel with the longitudinal edge of the film.

### Photo-Era History

THE offer by a friend of a duplicate copy of the initial number of PHOTO-ERA reminds the editor that he has a few copies of his own that he has acquired for the purpose of furnishing them to those who may be interested.

The youngster seems to have been healthy, strong and good-looking, his dimensions being  $7 \times 10\frac{1}{2}$  inches, and was christened "May, 1898, Vol. I, No. 1," making a big noise once a month. Exclusive of advertisements, there are twenty-four pages, including a number of illustrated articles and independent illustrations. The articles are, in order, "Art in Portraiture," by Wilfred A. French; "With Lens and Pedal," by E. P. Sibley;

"A Recent Exhibition" (Boston Camera Club), by W. Albert Hickman; "A Winter Ramble in Middlesex Fells," illustrated, by C. F. Stiles; "On Shutters," by W. Albert Hickman; "Art-Photography in Animal-Life," illustrated with cat-photographs by C. E. Bullard; followed by two pages of editorial and news-



THE FIRST NUMBER OF PHOTO-ERA

items. The initial picture, an inserted frontispiece, is a superb full-page heliotype print, from a negative by Wilfred A. French, entitled "The Dairy Maid." Then follow, in halftone, marine-pieces by Joseph Prince Loud, a full-page view of Peterboro' Vale, by Wilfred A. French, a wood-interior and a view of Stony Brook Bridge, in Back Bay Fens, by Henry Lewis Johnson, and a winter-scene by J. P. Loud.

The magazine was issued by the New England Photo-Era Publishing Company, Boston, Mass., with J. C. Abel, manager, and an advisory board consisting of J. W. Barber, Henry Lewis Johnson, Joseph Prince Loud and George Jepson.

As to the title, "Photo-Era," it has not been found necessary to change it during the nineteen-year life of the magazine, except that — in December, 1900, after the property and rights of the *American Journal of Photography* had been acquired — the name of that publication was used as an auxiliary title. Copies will be mailed, packed and postpaid, at fifty cents each.





## LONDON LETTER



ONE of the brightest and most entertaining photographic magazines on this side of the water is the *Professional Photographer*, published monthly by Kodak. As it is a professional and trade paper, and is sent free by Kodak to their customers, it does not get the publicity that it merits. Besides other helpful and informative articles, there is always an interview with some well-known professional photographer. In the December issue Malcolm Arbuthnot is the subject, and some of his remarks on the present public taste are worth recording as indicative, perhaps, of a change that is very slowly working its way through picture-loving people. Mr. Arbuthnot was asked if he did not find that sitters wanted conventional, ordinary portraits. His answer was a most emphatic "No!" He went on to say:

"I find that they come to me because my style is unconventional. They want something different. They are tired of the half-dozen text-book poses and the two or three standard lightings which are turned out mechanically from so many studios."

This is very interesting, if it is true of the general run of sitters. Of course, it has been true of a certain number of people for many years — people to whom the ordinary conventional heavily retouched photograph was an abomination; but if the man and — more especially — the woman in the street are about to change their spots, or, more properly speaking, their artistic ideas on photography, and also if they insist on getting what they want, then things may not only hum, but professional photography will certainly improve.

In addition to the interview, there are pictures of the studio in which the photographer works, and also illustrations of his professional portraits — all beautifully reproduced — so that the reader has the material at his disposal to form an independent opinion as to the results. Then, again, there is a short note every month headed, "In Confidence, by the Receptionist." This is always not only humorous and alive, but exceedingly clever, and many a professional would be overjoyed to obtain such a wonderful business woman. At any rate, we should like to know who the comic author really is.

*Snapshots* — the monthly record of the Snapshots From Home Movement, instituted by the Y. M. C. A. — has had some difficulties to contend with. The circulation grew so enormously — as a copy is, or rather was, posted to every member free — that it has become somewhat of a financial burden. Now it is proposed to send copies only to those who demonstrate their interest by asking for the magazine. The hut applications for photographs, which were available to soldiers in the huts of the Y. M. C. A. all over the country and in France, are to be discontinued. All energies are to be centered on workers, to induce them to search out and photograph those in their own districts who have relatives serving either in the Navy or the Army. This has always been, by far, the most important part of the undertaking, and it can be conducted with much less clerical work than the applications from the men on active service. In this way, a fresh lease of life will be assured to this most successful movement, that has done so much to cheer our fighting men and their families.

We have heard a good deal about war-photography from airplanes, but never as we told how it is done. The following quotation from a Russian observer on

the West front puts clearly, in few words, the actual method of taking a map-photograph over the enemy-lines. It is worth recording:

"Photographing the enemy-positions is at once the most ingenious and the most dangerous of aerial operations. The aviator-photographer, having risen to a great height above the enemy-position, settles his airplane almost vertically above the position he is going to photograph. Descending a certain distance, he arranges his camera, makes his photograph of the German defenses and at once climbs up at top-speed in order to regain his own lines. . . . All the while that his dizzy maneuvers over the German positions are going on, he has to face the fire of anti-aircraft guns, machine-guns and rifles."

H. G. Wells, who has lately been afforded opportunities to study certain things in France, takes us a step further and describes the *result* — the actual print made from the negative obtained in such an exciting and dangerous manner. Americans have probably had an opportunity to see his articles entitled "The Western War," which have been appearing lately in some of the English and American papers.

The Canadian war-photographs, at the Grafton Gallery, are still drawing big crowds, and it has been decided to keep the exhibition open till the middle of this month.

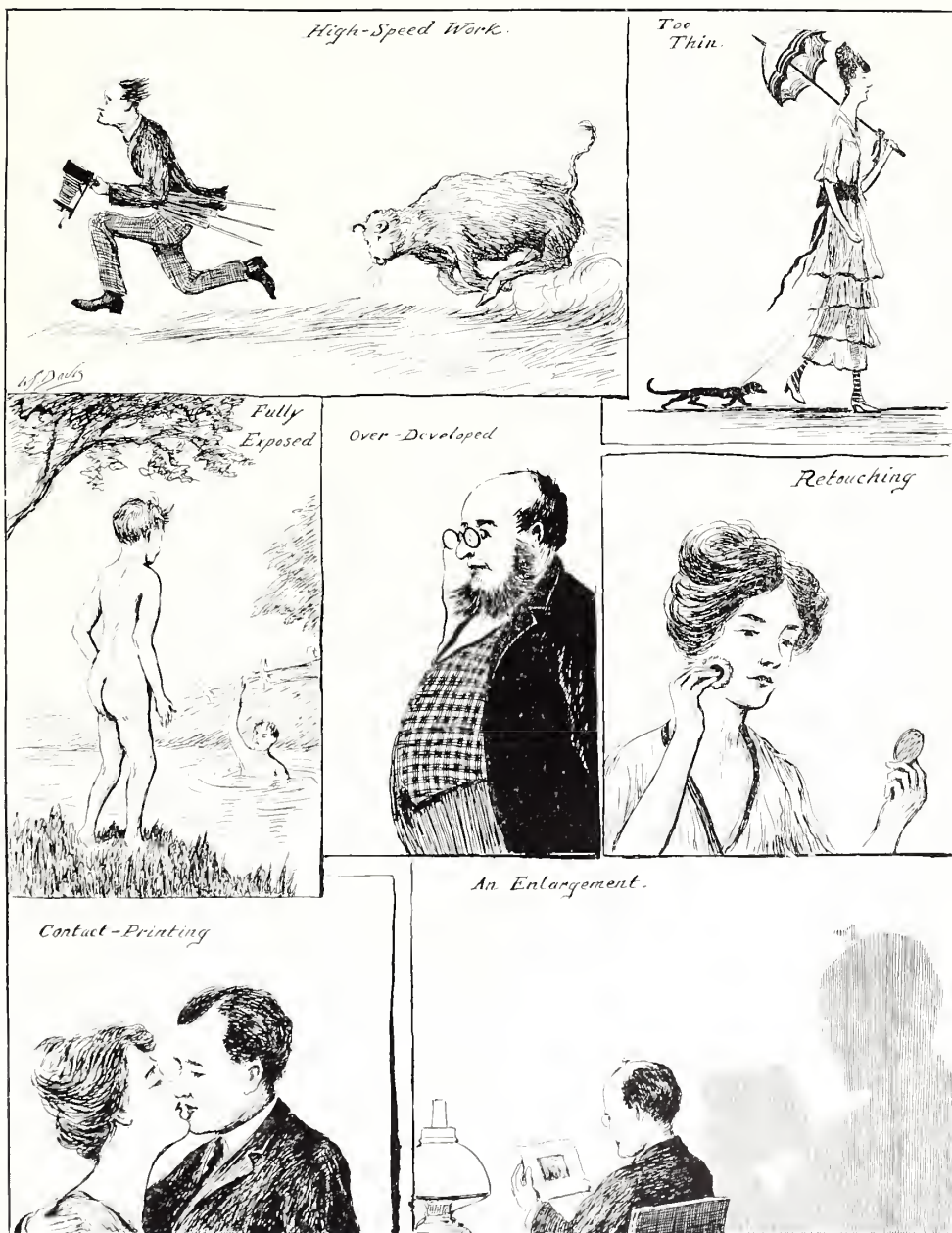
A dramatic meeting took place there last week. Captain W. Trevelyan, of the First Field-Ambulance, was standing in front of one of the enormous prints depicting the taking of Poziers, in which he, himself, was one of the subjects. It was taken just at the moment when he was helping a wounded "Tommy." Suddenly he heard a voice behind him say, "I have n't had a chance to thank you yet, Sir. I was your patient at Poziers, and am in the picture there with you." And this was the wounded "Tommy" of the photograph, who now stood on crutches, Corporal Carter, of the 27th Battalion. It was a curious coincidence that both men should be home on leave at the same time and that both should hail from Winnipeg. This extraordinary meeting was witnessed by Captain Ivor Castle, the official photographer to the C. E. F.

The Camera Club is having a members' exhibition which is interesting, as it shows signs of the influence of the club's "Forward Movement." Of course, the work shown is bound to be uneven in quality, but one must admit that it is a wonderful effort in these times of strain and stress. Some of it shows the influence of the exhibitions of modern paintings and etchings. Neither photographers nor any one else possessing the least creative faculty can sit daily among the pictures of some of our best and most advanced artists without absorbing some of their spirit and showing traces of it in their work. As Antony Guest says, "The inexpert are goaded into proficiency, and skilled photographers — on being reminded of all that color implies — are induced to carry out their work with a view to the suggestion of color."

We hear on good authority that the next exhibition, there, will be by Mr. A. L. Coburn.

Before these notes are in our readers' hands, the Kodak Bromide Book, to which we referred in the autumn, will have been published. We have had an opportunity to see some of the advanced pulls from the blocks that illustrate the various articles explaining the methods of different photographers. It is not too much to say that they touch the high-water mark in halftone-work. The wonder is that they could be produced in this time of war. We hope to have more to say about this book when it is actually out.

CARINE AND WILL CADBY.







*Photo by Frances Johnston*

## A Rapid Convertible Lens of Wide Application

In this one lens, at a comparatively low cost, you get the service of three—each adapted to a different kind of work.

# Bausch<sup>and</sup> Lomb

## Protar VIIa

is a doublet, the single elements of which are unexcelled for the large variety of purposes requiring a long focus, medium speed—as for instance, landscape work, architectural subjects, machinery and groups.

The doublet is a rapid anastigmat, more than twice as fast as the ordinary camera lens, adapted to any ordinary instan-

aneous work. Because of its large image circle it may be used as a wide angle lens on larger plates.

The advantages of the VIIa are set out in detail in the booklet, "What Lens Shall I Buy?" This booklet covers the C and D Protar Sets, which are the most universal lenses made. A copy will be sent free on request.

## Bausch & Lomb Optical Co.

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Leading American Makers of Microscopes, Projection Lanterns (Balopticons), Photographic and Ophthalmic Lenses, Stereo-Prism Binoculars and Other High-Grade Optical Products.



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## Photo-Era, The American Journal of Photography

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KATHERINE BINGHAM, Editor, Monthly Competitions

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SILENT HOMAGE

FANNIE T. CASSIDY

# PHOTO-ERA

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## Getting Meaning in a Picture

In Three Parts — Part II

C. H. CLAUDY



AS far as I know, there are but two broad paths which the artist who uses photography as his medium can tread, in his travel towards the goal which shall be a picture made of intention and purpose.

These are:

(1) Conceiving an idea for a picture, and by manipulation of subject, camera, view-point, light and shade, exposure and stop, producing a negative which will give a print that embodies the idea which was the mainspring of the whole performance.

(2) Having an idea, whether conceived in advance of the making of a negative or suggested by a negative after making, producing a result embodying that idea by retouching, juggling the negative, faking, double-printing, multiple-exposure of print, or other technical process upon photographic material in hand, rather than upon the subject or with the camera.

That the one is as legitimate as the other has been a mooted point for sometimes acrimonious discussion ever since the first camerist contended with the artists of pen and brush for recognition. The so-called photographic purist who admits no retouching, and objects to any jockeying with the negative, in the humble opinion of the writer, has not a leg to stand on — yet stand he does, and, in some quarters, very solidly! — perhaps upon wraithlike legs of tradition and prejudice! However that may be, the present scribe has never seen what appeared to him as a rational argument why an artist must be debarred from any technical operation with his tools, or why he should stop short of anything which will yield the result he wishes. No one quarrels with the artist with canvas and tubes of paint, whether he lay it on with palette-knife, brush or his own two thumbs. The best method is for him to select.

Of the sculptor we inquire only if his modeling

is true, his conception beautiful, his finished statue appealing — never if he used a chisel, a saw, his fingers or a knitting-needle in moulding the clay!

"What has he done?" inquired Napoleon, and, "What has he done?" echoes the public and the true critic of a picture — never, "How has he done this thing?"

Therefore, criticisms of the artist who uses a stump upon his negative, makes three contact-positives, three enlarged negatives, and prints through a ground-glass with tufts of cotton representing clouds, upon multiple-gum, which he draws upon with pigment and brush afterwards, seem scarcely fair. The brush-artist presents a painting, and no one questions whether it was all done with a *brush*. Why should not the photographic artist present a photograph without question as to whether it was *all* done with lens, plate and developer?

That the first method mentioned of really getting meaning in a picture is the most difficult, few who have tried both methods will dispute. Obviously, it is far easier to describe a lady's eyes in plain prose than in a sonnet; yet the maker of good sonnets is lauded as clever not only with his words but with his brains. Similarly, the purely photographic picture — and by purely photographic is meant without the use of those hours of hand-work afterwards — is perhaps more worthy of praise as the successful fruition of a difficult undertaking than is as good a picture made piecemeal — part in the studio and part in the laboratory. But that the one result can command any more admiration than the other, both being equally good, is not logical.

Therefore, one comes squarely against the question — Do we try to make pictures by photographic means for the sake of accomplishing a task, or to get the result? And if we answer the latter, then it is equally obvious that any method



which will bring about that result is a legitimate method, and should be considered.

Let us turn to the snapshot-artist and his sunset. In the first paper, some unmeasured words were flung at this wayward person for his insincerity in trying to read into his hurried photograph, *via* a title, a meaning it did not possess. Now, let him take his title before he takes his camera, and work forward from it, and not backwards to it. Let him begin with a conception — perhaps a picture he visualizes mentally as “The Coming of Night.” Let him first put that conception into words, as nearly as he can. Perhaps, to him, Night is as positive an entity as the Day — not a mere absence of light. As Day, dying with the sun, and sinking to rest in the arms of the cloud-forms in the west, shrinks away from the earth, Night, a beneficent spirit (to this mythical photographer), rises from the east, her shadowy arms reaching wide to encompass the landscapes. The shadows on the grass are faint and worn, as the sun loses its power, the trees are still with the dropping of the breeze that dies before the sun, and the motionless landscape seems to wait, dropping, unexpectant, for the embrace of that shadowy curtain which will so soon envelop the world in darkness.

Not being a poet, nor much given to poetic creations, the present scribe finds it somewhat difficult to mouth, even for a mythical character, a conception which forms the basis of a pictorial photograph. But, leaving beside the question all faults in the above paragraph as a word-picture, would it not be a task from which an artist would gain much satisfaction, to produce in monochrome a picture which *should repeat that conception, in thought though not in words, to the beholder?*

It would not be an easy task. First, there would be the particular landscape to find — first mentally, then in actual fact. At least, that is the way a brush-artist would do it. Conceding something to the photographer's difficulty, he might well search for a suitable landscape, to be — as it might be called — the frame of his picture. Were the writer doing it, it would have to be a wide, open plain with a river in the middle distance and a bare tree or two. Why? Because that is the way the mental picture called up by his own words takes form, and to attempt to photograph anything else against such a conception and mental picture would be to violate the very principles for which this story stands, viz., the following out in practice of a conception made *before* practice begins, rather than fitting onto successful practice a conception evoked by that practice. This should be easily understood.

However, the mythical sunset-seeker has

found his landscape — whether it be hills and forest, or plain and a river, or trees and a church-steeple, matters not one whit, so it fits his mental conception. Then he goes to work, evening after evening, with camera and lens, making studies. Alas, that the overworked word has been seized upon by the luckless near-artist as a label for his abortive efforts. To the painter, a “study” is a bit of practice-work, a fleeting note of a single phrase of the picture he would some day paint. That some of them are in themselves beautiful, is no matter of wonder. The scraps of paper on which Beethoven and Wagner made their musical notes contain gems of musical thought, but no one has dared put them forth as more than what they are. But, too often, the photographer, using the word as an excuse for what he has not accomplished, pitches it headlong at anything, landscape or portrait, and sits back smug with satisfaction, for — “Is it not what painters do?”

A study is a study, and nothing else. Our mythical friend makes real studies of his landscape, with various and sundry sunsets. He develops each plate as carefully, makes each print as lovingly, as if it were the finished picture. In this the sunset is too vivid — in that, too dull. Here the shadows are too brilliantly sharp — in this they are not existent at all. Probably there are regrets — *if* the clouds of this one had only been in that one with the strange glow along the horizon, but — and so on. If accurate data are kept, there comes a time when the photographic artist no longer hopes and thinks, but *knows* just where he is. He need no longer make exposures when conditions are not just right — he knows from previous experience when they are. Experiment and trial have shown him that composition, standpoint, focus and stop are right — that all he needs now is the right combination of sky and light and hour and God-given grace to see. And some day — it may be a week, a month or a year after he started — the occasion comes, the single negative is made which embodies *all* that has been learned in many patient hours, and his original conception lies before him in a single, simple print.

Is there any comparison between the man who works this way, painfully, toilsomely, perhaps prayerfully and earnestly, and him who snaps a sunset and calls it “Coming of Night,” in the hope that he will strike a responsive chord somewhere?

It may well be that the day never does come when the one negative can be made which embodies in all perfection the conception as existing in the minds of the artist photographer. He then has recourse to the second method. In one nega-



GETTING READY FOR BUSINESS

CHESTER GRILLO

tive is his landscape, in another his sunset, perhaps in a third a crescent moon which may belong to his idea. Patience and technical skill can make one negative from the three. Finger-magic and a proper use of stumps, ground-glass and the art of the printing-room can get from the combined negative a print which possesses all that the negative did not, and this time, in paper alone, there comes forth the fruition of desire, the full flower of patient work.

Is there comparison between *this* and the haphazard snapshot, beautiful though it may be, titled in a moment of exaltation over its sensuous appeal? Hardly.

Of course, there need be no argument concerning the difficulty of this way of making a picture, this method of getting meaning into a composition. It is hard. It is laborious. It is not much fun. It is no primrose-path of luxury. It costs

time and money, and plates and paper, and patience without end. But when it is done and there is a real result, there is no satisfaction equal to it, not in a hundred handsome photographs, casual and incidental; no, not if they have titles chosen for them with the skill of a Kipling!

The writer who sat him down to spread a story across the page, and wrote but words and titled it afterwards as seemed to him best, would never get in print. The artist who painted a fancy head, stuck a baby in somewhere and called it Madonna, would never get his picture hung. The musician who scrawled notes upon the staff as his fancy dictated and called it "Song of the Storm," would get little but laughter. Why, then, should we of lens and plate hope to escape oblivion if we try to escape the labor of art, merely because science has laid in our hands a perfect technique?



# Scientific Development

GASTON M. ALVES

## DEVELOPMENT TABLE

### MEAN TEMPERATURE SOLUTION

|          | 61 $\frac{2}{3}$ | 62 $\frac{1}{3}$ | 63               | 63 $\frac{2}{3}$ | 64 $\frac{1}{3}$ | (65) | 65 $\frac{2}{3}$ | 66 $\frac{1}{3}$ | 67               | 67 $\frac{2}{3}$ | 68 $\frac{1}{3}$ |
|----------|------------------|------------------|------------------|------------------|------------------|------|------------------|------------------|------------------|------------------|------------------|
| 10 Mins. | 12 $\frac{1}{2}$ | 12               | 11 $\frac{1}{2}$ | 11               | 10 $\frac{1}{2}$ | (10) | 9 $\frac{1}{2}$  | 9                | 8 $\frac{1}{2}$  | 8 $\frac{1}{2}$  | 8                |
| 15 Mins. | 19               | 18               | 17               | 16 $\frac{1}{2}$ | 15 $\frac{1}{2}$ | (15) | 14 $\frac{1}{2}$ | 13 $\frac{1}{2}$ | 13               | 12 $\frac{1}{2}$ | 12               |
| 20 Mins. | 25               | 24               | 23               | 22               | 21               | (20) | 19               | 18               | 17 $\frac{1}{2}$ | 16 $\frac{1}{2}$ | 16               |

### INITIAL TEMPERATURE SOLUTION

| <i>Temp. Room</i> |    |    |    |    |    |      |    |    |    |    |    |
|-------------------|----|----|----|----|----|------|----|----|----|----|----|
| 50, 51,           | 67 | 68 | 69 | 70 | 71 | (72) | 73 | 74 | 75 | 76 | 77 |
| 52, 53,           | 66 | 67 | 68 | 69 | 70 | (71) | 72 | 73 | 74 | 75 | 76 |
| 54, 55,           | 65 | 66 | 67 | 68 | 69 | (70) | 71 | 72 | 73 | 74 | 75 |
| 56, 57,           | 64 | 65 | 66 | 67 | 68 | (69) | 70 | 71 | 72 | 73 | 74 |
| 58, 59,           | 63 | 64 | 65 | 66 | 67 | (68) | 69 | 70 | 71 | 72 | 73 |
| 60, 61,           | 62 | 63 | 64 | 65 | 66 | (67) | 68 | 69 | 70 | 71 | 72 |
| 62, 63,           | 61 | 62 | 63 | 64 | 65 | (66) | 67 | 68 | 69 | 70 | 71 |
| 64, 65,           | 60 | 61 | 62 | 63 | 64 | (65) | 66 | 67 | 68 | 69 | 70 |
| 66, 67,           | 59 | 60 | 61 | 62 | 63 | (64) | 65 | 66 | 67 | 68 | 69 |
| 68, 69,           | 58 | 59 | 60 | 61 | 62 | (63) | 64 | 65 | 66 | 67 | 68 |
| 70, 71,           | 57 | 58 | 59 | 60 | 61 | (62) | 63 | 64 | 65 | 66 | 67 |
| 72, 73,           | 56 | 57 | 58 | 59 | 60 | (61) | 62 | 63 | 64 | 65 | 66 |
| 74, 75,           | 55 | 56 | 57 | 58 | 59 | (60) | 61 | 62 | 63 | 64 | 65 |
| 76, 77,           | 54 | 55 | 56 | 57 | 58 | (59) | 60 | 61 | 62 | 63 | 64 |
| 78, 79,           | 53 | 54 | 55 | 56 | 57 | (58) | 59 | 60 | 61 | 62 | 63 |
| 80, 81.           | 52 | 53 | 54 | 55 | 56 | (57) | 58 | 59 | 60 | 61 | 62 |



THE employment of the above table is as easy as its results are reliable. In fact, the method offered is not only scientific, but it is one than which none is more simple in application. The first line, the "mean temperature solution," need not be considered by the practical worker. But he will be concerned with all of the other values of the table. Following the first line are the time-tables, for 10-minute, 15-minute, and 20-minute scales. The main body of the table constitutes the "initial temperatures" of the solution. The extreme left column of the table constitutes a list of the "room temperatures."

It is assumed that the developing-mixtures, and the tank or developing-vessel, are kept near together in the darkroom, and that a thermometer hangs near them — so that they all will have a "room" temperature.

To develop, we enter the darkroom and note the "room" temperature as recorded by the thermometer. We then place our exposed plates in the tank and cover it. Next we find the position of our "room" temperature in the left-hand

column of our table. From this position, and in a direct line to the right, we proceed to the central or bracketed column, where we find the proper temperature to make our developing-solution. This done, we pour the solution over the plates in the tank, and develop them for the 10, 15 or 20 minutes — depending on whichever scale we use. The correct time is found at the head of the bracketed column. But in making up our developing-solution, it is not likely — nor is it necessary — that we should hit exactly the particular bracketed temperature, as the table allows liberal latitude. An effort to approach the bracketed temperature is advisable, then, whatever it may be, in the *same line*, right or left, we find this temperature and proceed up *that* column for our time of development.

All of the foregoing should be clear, but it may be well to give an example:

Suppose we are using the ten-minute scale; suppose we find the temperature of our darkroom to be, say, 72; we find 72 in the left-hand, or "room" temperature, column of our table, and proceed from thence in a direct line to the right



THE TOP OF THE HILL

LYSANDER E. WRIGHT

until we reach the central or bracketed column, and there find 61 as the proper temperature of our solution. If, in the make-up of our solution, we happen to hit this 61, we then ascend the same bracketed column, and find that 10 minutes is required for the development. But suppose that, after we have made up our solution, we find its temperature to be, say, 58. Then, passing in the same line to the left, we find 58, and ascend *that* column and find our time to be  $11\frac{1}{2}$  minutes for development. Suppose, again, that we had made our solution at a temperature of 63, then we will find our time of development to be 9 minutes.

Now, it is necessary here to consider another matter. In proper development there should always be at least occasional motion of the solution over the plates. But this affects the time of the development; therefore, always make this motion the same, in order to maintain uniform time. You may get this by inverting your tank, lifting the edge or rocking the vessel; but always do it to the same extent in all of your developments.

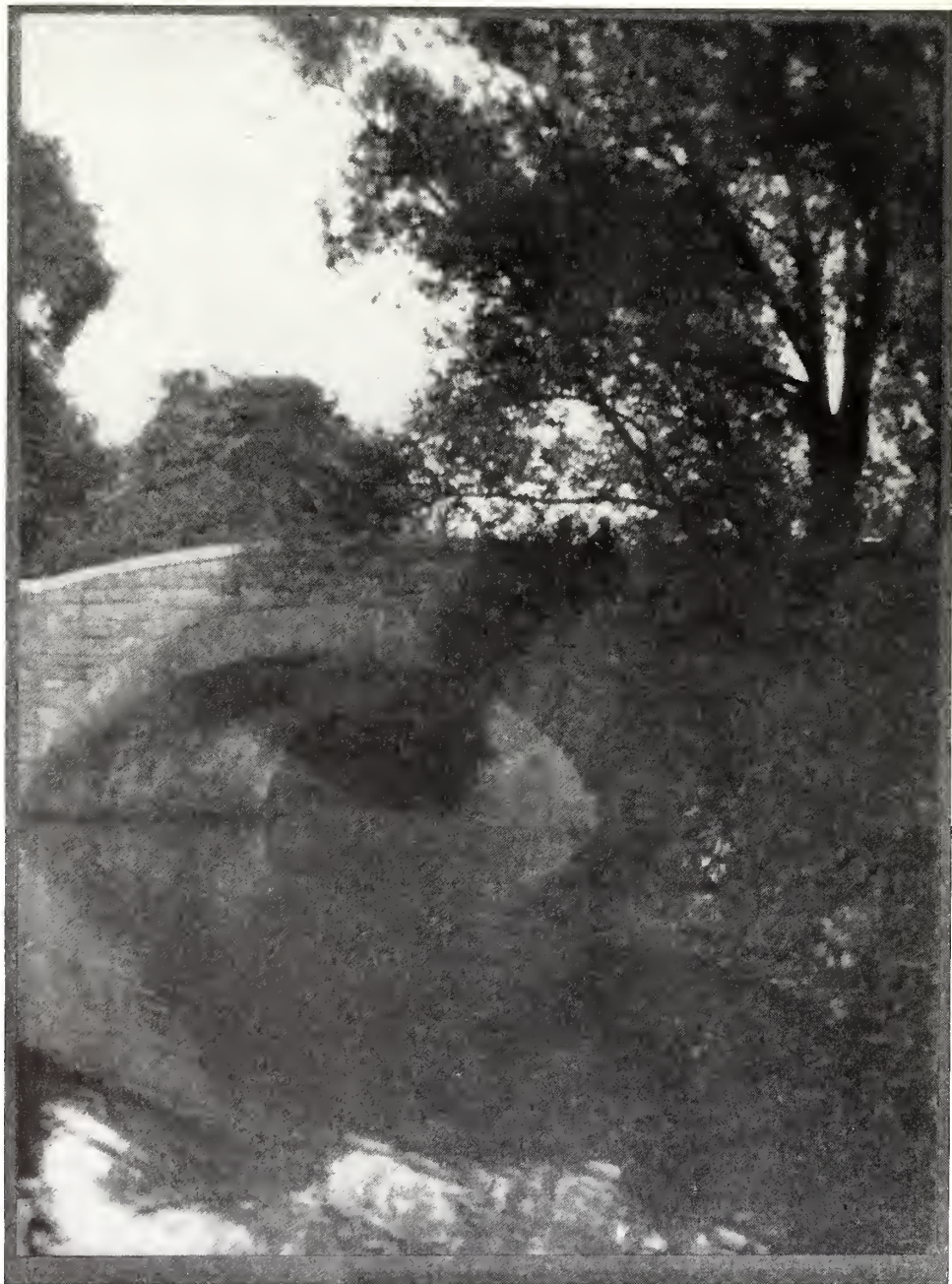
How strong to make your developing-solution so as to have a 10- a 15- or a 20-minute scale,

you must ascertain by experiment. Chemicals vary, and you must make your own tests with those you are using. This is by no means a difficult thing to do. Whenever you develop a negative, you make a test and an experiment, providing you preserve the data.

All of the foregoing applies to ordinary photography and for usual scenes and subjects. In an exposure of a distant water-scene with delicate clouds above, you will find that full-time development may "plug-up" your negative. You will find probably that about half-time development will be right. Also, for delicacy, you will find that for heads of women and children about three-fourth time development will give you more pleasing results.

In all of your applications of the table and its methods, be sure to adhere to the directions. Especially, do not tamper with the "room" temperature of your tank or developing-vessel. Pour the developing-solution into it just as it is and — before using it — do not, in any way, attempt to bring it to the temperature of your solution, as the table takes care of differences of temperature. Also, in your trial-tests for time, bear in mind that your negative is not the final





SCARBOROUGH BRIDGE  
C. E. DODGE



test; but rather the print you obtain from the negative. Often a negative appears to be good but the print it yields does not give realistic contrasts. To repeat: judge whether you have found the proper time-scale by the prints, and whether the contrasts are real and true to the subject.

#### DISCUSSION

The general worker will not be interested in what follows—he wants simply results, and cares little for the principles. If he carries out the foregoing instructions, he will get his results. But the student—he who is among those who make the authority in any pursuit—will always demand an exposé of the principles. It is for him that this discussion is given.

When a developing-solution of different temperature from the room is poured into a developing-tank of the same temperature as the room, the temperature of the solution immediately begins to change towards that of the room. It is not necessary to our purpose to attempt to uncover the natural law which measures the progress of this change; but it is proper here to point out that the change is not gradual in an arithmetic but in a geometric sense. The mathematician could not deal with it in any equation of a right line; he would have to employ an equation of a curve, i.e., its own peculiar curve. It is sufficient here to point out the fact that at first the change takes place rapidly, and then continues at a gradually decreasing rate—being exceedingly slow in its last stages. It is found by experimentation that within the limits of 10 to 20 minutes the temperature taken at about  $7\frac{1}{2}$  minutes will represent—for all practical purposes—the mean or average temperature. This result is made use of in this investigation.

We will call the temperature of the solution in the retainer, when ready for use, the initiative temperature, and the average or effective temperature, the mean temperature.

Let A represent the initiative temperature;

B, the mean temperature;

C, the room temperature.

Now adequately repeated experiments furnish the following equation:

$$(1) \dots B = \frac{2A + C}{3}$$

From which we derive,

$$(2) \dots A = \frac{3B - C}{2}$$

And,

$$(3) \dots A = 1\frac{1}{2} B$$

In the construction of the table, convenient

and numerically consecutive values of A are placed in its body. Then, by means of equation 1, the corresponding values of B are placed in the top line. The problem now remains to construct the time-scales:

It is evident that what directly affects the development are the values of B. But a little reflection will show us how difficult it would be by experimentation to obtain a scale of these values. We would either have to employ a cycle of the seasons—and then be sure that our chemicals remain the same during that time—or make use of a method of steady temperature-control, equal to that of a storage-plant.

However, the values of A can readily be gotten by experiment; and it is found by such that the values of A vary so, that within the usual developing-temperatures a difference of 15 degrees will just about double or halve—depending on whether we descend or ascend—the time of the development. But equation 3 shows the relation of B to A is as 2 to 3. Consequently, in terms of B, 10 degrees of difference will double or halve. But, again, our values of B in the table are seen to vary not by one degree, but by two-thirds of a degree. Hence, to connect these two-thirds degree points of contact, we find that the chain for doubling or halving must contain 15 of these two-third degree links. The problem remains to trace the curve, or find values for these 15 links.

The mathematician will see that if we place the normal time at the agreed 65 degrees, then take the logarithm of this normal time, and successively add to it one-fifteenth of the logarithm of the number 2 as far up one side of the curve as we want to go, and, for the other side, deducting instead of adding, we will have a set of logarithms—when converted to numerals—that will give the proper values to the links of the chain. Taking a 10-minute scale, and applying the above, we get: 12.60–12.03–11.49–10.97–10.47–(10)–9.55–9.12–8.71–8.31–7.93.

But without injury to practical results, these values may be taken to the nearest half-minute, and they are so placed in the table. The 15- and 20-minute time-scales are computed in the same manner.

We will now point out the defects of the prevailing methods of development. The old method by inspection, and one now very commonly used, relies almost wholly upon density. It is impossible to judge, in the light of a darkroom, the gradual development of the contrasts. Indeed, even the finished negative, when fixed, can best be judged for the important thing—realistic contrasts—by a print. Consequently, since our exposures are seldom if ever exact in their development—where density is the chief test—



the longer exposures are taken out too soon. The result is dull, lifeless and under-contrasty prints. On the other hand, the short exposures are left in too long, and yield harsh and over-contrasty prints — approaching the “soot-and-whitewash” type. It must be remembered that within usable limits — all other conditions being equal — the contrast is as the length of time of the developing.

The chief thing is realistic contrasts, and mere density is secondary. Indeed, when properly developed, there is a wider latitude of exposures than is generally imagined which with proper printing will yield identical prints. In fact, the old nomenclature of overexposure and under-exposure has lost much of its significance. Nevertheless, good exposure is still important. Developing by inspection injures the range of exposures which, with proper development, would yield satisfactory results. The negatives are more or less thick or thin; but with proper printing they will yield identical prints. It is an established fact that all usable negatives — whether thin, thick or normal — in like conditions of development reach realistic contrasts in the same time. Hence, when properly developed, the negatives give a complete index to the exposures. The thin, the normal and the thick respectively show the under, the normal and the over exposures.

The “first-appearance” form of development carries with it — in a lesser degree — the defect found in the method just examined. It gives an over and under development for the errors in exposure. However, this may be largely obviated when we develop a number of plates at the same time. In such a case, there will likely be some exposures approaching the normal, and the time factor for these may be made to govern all of the plates in the tray. Under such restriction, the “first-appearance” method offers a fairly suc-

cessful mode of development. Of course, the tank cannot be used in this and the inspection-method of development.

What are generally offered as the “time and temperature” methods are defective in several ways. In the first place, it is too limited in its scope of application. In warm weather its employment encounters the danger of degenerating the sensitive surfaces of the plates, and in cool weather the chemical actions are intolerably slow. Other methods are preferable.

No system of development is satisfactory that does not confine its “mean” temperature within four or five degrees on each side of the normal 65. Still another defect in this system is that the values seem to have been obtained from experimenting with “initiative” temperatures, and we are compelled to apply these to the “mean” temperatures. This accounts for the fact that such systems give too long a development in warm and too short in cool weather.

However, there is a method of “time and temperature” development that may be used with reliable results. It takes no notice of “room” temperatures, and its chain of variations is computed — as it should be — to ten links. In its use no heed is taken of the temperature of the room. The developing-solution is poured on the plates and on the thermometer, after about seven and a half minutes, the thermometer is read, and the reading applied to a properly computed time-scale. Although this form of development is fairly accurate and carries simple directions with it, yet the method first given in this article will be found easier to apply. The “time and temperature” method is given here as follows. In making up the solution it must be so managed that the temperature, when taken, will fall between the 60 and 70 degrees of the table.

TEMPERATURE OF SOLUTION  
(To be taken about  $7\frac{1}{2}$  minutes of the development)

|          | 60 | 61              | 62              | 63              | 64              | (65) | 66              | 67              | 68 | 69              | 70              |
|----------|----|-----------------|-----------------|-----------------|-----------------|------|-----------------|-----------------|----|-----------------|-----------------|
| 10 Mins. | 14 | 13              | $12\frac{1}{2}$ | $11\frac{1}{2}$ | $10\frac{1}{2}$ | (10) | $9\frac{1}{2}$  | $8\frac{1}{2}$  | 8  | $7\frac{1}{2}$  | 7               |
| 15 Mins. | 21 | 20              | $18\frac{1}{2}$ | 17              | 16              | (15) | 14              | 13              | 12 | $11\frac{1}{2}$ | $10\frac{1}{2}$ |
| 20 Mins. | 28 | $26\frac{1}{2}$ | $24\frac{1}{2}$ | 23              | $21\frac{1}{2}$ | (20) | $18\frac{1}{2}$ | $17\frac{1}{2}$ | 16 | 15              | 14              |

In concluding this discussion, it may be proper to point out that pure reason — or pure science — can never be realized in the absolute in applied physics. The best that can be done — and, indeed, all that is required — is to reach such an approximation under the natural laws of the subject as will give reliable and dependable results for enlightened practice. The treatment

given here is offered with confidence that it will do this efficiently and well.

TASTE — which has been described as the finest ornament and purest luxury of a land — is a thing of culture, and to its full enjoyment we may not hope to attain till the eye has been trained as well as the hand.—*George C. Mason.*

# A Practical Home-Made Electric Printing-Box

JOHN BUTLER

**J**UDGING from the number of articles and notes on printing-boxes — electric and otherwise — that appear occasionally in the photographic press, it would seem that no amateur with any skill in making or modifying to his own requirements need be without one or the other of the printing-boxes here described.

The writer has good cause to remember his first few years of printing with developing-out papers. It was always necessary to wait until it pleased the other members of the household to leave the kitchen to darkness and to him. Then,

kind in mind were decidedly practical, and the finished equipment, in many cases, was comparatively inexpensive; but the wiring, etc., looked complicated, and there were too many small parts to be obtained and fitted together. Not one of these printing-boxes, however, seemed to meet exactly the writer's own requirements. Finally, the box described and illustrated in the following paragraphs was made, and, after seeing the illustrations, the reader must surely agree that it is a very simple arrangement. If he is at all handy, he can make a similar one in a few hours and at a very moderate cost. The writer's cost

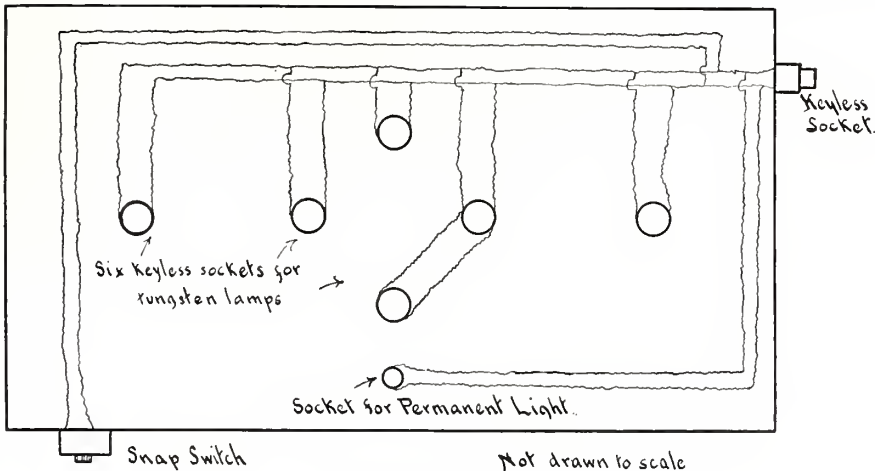


FIGURE 1.

Wires Shown running in straight lines for clearness

there were the trays, the little yellow lamp on one side of the table; the printing-frame, negatives and paper on the other, with a cardboard-partition between. Next, the hanging droplight with conical shade was brought to within a foot or so — generally “so” — of the chair, upon which rested a watch and printing-frame — when exposing. This arrangement, at the time, gave perfectly satisfactory results, but it took too long to get into action. There was but one bulb — a 25-watt tungsten — and if the negative was at all dense, a long exposure followed, with frequent looks at the little second-hand of the watch. Whenever any work was done, up came the thought of the ideal printing-box, with its convenience and efficiency.

All the articles on home-made apparatus of the

less than \$5, and, if the box is to be used only occasionally, this expense may be cut down still further by taking tungsten lamps from spare rooms, or other sources in the house, and returning them when the work is completed.

No dimensions are given in Figure 1, as the apparatus shown was made very large and not of exactly pleasing proportions, through the necessity of having to use it for printing negatives 7 x 17 inches. A box for 8 x 10 inches would be the size generally used, and the reader can easily calculate the dimensions of the box he expects to make. A carpenter can furnish, cut and put together the wood — preferably one-inch Pattern Pine — for a moderate sum, should the reader have neither the time nor the inclination to do the work himself.



Care should be observed in the wiring. Ordinary lamp-cord, or its equivalent, should be used, and a piece of asbestos paper, or thin sheet-rubber, should be placed under each socket, using electric tape wherever a join is made in the wires or such a join rests on the wooden false bottom, to be described later. A socket is placed on the right-hand end of the box, as shown in Figure 1, and wires on the false bottom are connected to this, leaving enough slack wire to enable the bottom to be lifted out for possible repair of sockets, or other attention. The sketch of the false bottom, which is simply dropped into the box after wiring, and rests on the bottom, or

convenient to have a top for each size printing-frame, as the change is quickly made from one top to another. The completed printing-box, when given a coat of shellac, makes a neat addition to any darkroom.

Figure 3 shows the completed box on a dark-room-table, and illustrates another feature not previously mentioned, viz., the safe-light — in this case a flashed-ruby glass of a light tint, or yellow may be used — which slides into the grooves provided and throws a safe-working light on the table, where the sensitive paper is loaded into the printing-frames. The light for this is furnished by a 4-candle-power carbon-lamp,

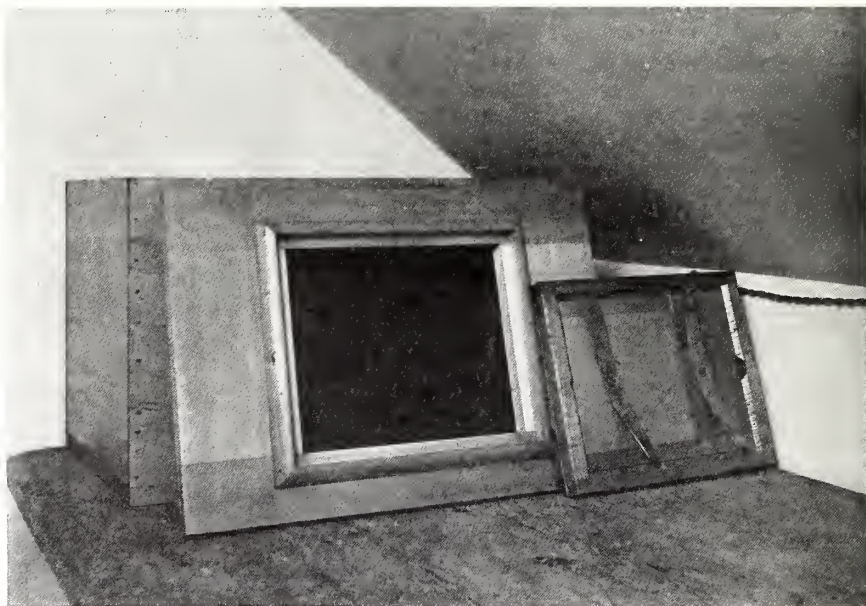


FIGURE 2

on two strips nailed to sides near bottom, is self-explanatory. The two end and center lights are used — not the side lights — when printing 7 x 17 negatives. The bulbs are taken out and placed in the two side sockets for 8 x 10 and smaller negatives, and thus form a cluster of four lights. With four 40-watt tungstens, the exposure for normal paper is generally but a few seconds, and a diffusing-screen of ground-glass or tracing-cloth — placed under the opening in top — may be used, although the writer has never found this necessary, as the illumination is diffused perfectly.

Figure 2 shows one of the removable tops. The outside dimensions of these tops correspond with the inside dimensions of the top of the box. They rest on a strip of wood placed inside on each end of the box, near top. It was found more

which burns continuously, as the switch on front of the box controls only the printing-lights. Two wide cardboard reflectors run V-shaped in the box, thus screening the light of this lamp from the opening on top. A red or yellow bulb may be used, in which case there would be no need of a ruby screen in the front opening. Where many prints are being made from a single negative, it might be well to allow the printing-frame with negative to remain in the top opening. Reloading may be done by lifting the hinged back of the frame.

The box described has been in almost daily use in the writer's darkroom for nearly a year, and he recommends it confidently to the worker who will spend a few hours' time to make one like it — or one modified to suit his own individ-

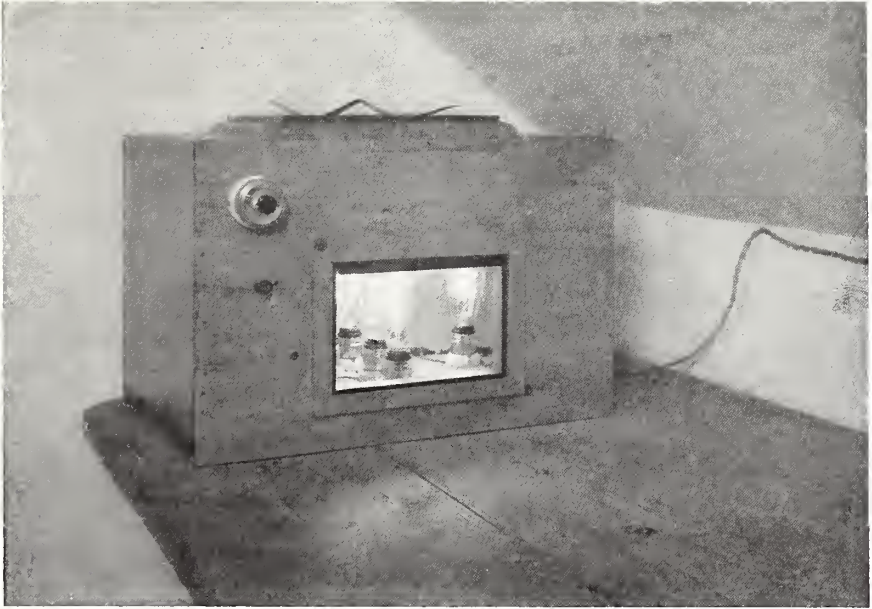


FIGURE 3

ual needs. Moreover, the writer assures him that the satisfaction in using it constantly and without trouble will amply repay the effort spent to construct it. In addition, there is always enjoy-

ment in the use of home-made photographic apparatus for the reason that sometimes it meets individual requirements to better advantage than a manufactured article, no matter how well made.

## Burson Makes Application

MICHAEL GROSS

**B**URSON was peeved. The fact that he had stood a dozen newly developed negatives out in the sun to make them dry faster was no reason for the strenuous talking-to he had just received. Did the boss think that in the first week of a fellow's first job he could learn everything? And, anyhow, if those plates had been of good quality, the sun would never have melted the emulsion and made it run off the glass.

"I guess it 's time for me to be looking around for a new job," Burson decided, as he came out of the boss' office. "No one in this place seems to appreciate an earnest, ambitious hustler, who is eager to get ahead."

True to his determination, he stopped off at the corner news-stand on the way home that night and bought a copy of *The Darkroom* — a photographic-trade weekly. In the train he turned to the page containing the "help wanted" ad-

vertisements and began to glance through them. The first and second — for novices — he rejected with a sniff of disdain. The third one, however, made him straighten up in his seat with satisfaction. "Whew!" he exclaimed, as he read it over again more carefully, "this 'ad' sounds like a summing-up of all my photographic knowledge."

"Assistant wanted"—the notice stated — "in an up-to-date studio. Must be an all-around worker; understand both outdoor and indoor photography; also know developing, printing and enlarging in all its branches. Apply to Box 338, care of *The Darkroom*."

"Why, if it were possible for me to make a job to order," Burson gloated, as he put a cross-mark to designate the advertisement, "I could n't make one that would fit me any better than this."

The letter he would write in answer to the advertisement was already forming in his brain. He knew — positively knew — that he was the





"OUR CHERUB"

O. H. LOOMIS

one man for the position, and he resolved, then and there, that his application should be worded so masterfully as to convince any one reading it that the writer was the only person who could "fill the bill" perfectly.

"I wonder what the boss will say when I tell him I'm leaving," was his next thought; "I suppose he'll get all flustered up about it. Well, serves him right," he went on; "if he knew how to appreciate a good man, I'd never even think of such a thing. This'll teach him to treat the next fellow right."

That night, after supper, Burson sat down to write his letter of application. "It is n't going to be as easy as I thought," he reflected, two hours later, as he threw his twelfth uninspired effort into the waste-basket. Then, suddenly, his bump of imagination — hitherto reduced to almost a dent — started to work overtime. Burson, under the spell, began to write. Words, phrases and whole paragraphs seemed to flow from the end of his pen, and he chuckled as he read over the

result of his inspiration. He had done even better than he thought he could. Modestly, and yet firmly — as became one who was sure of himself and his ability — the letter set forth his qualifications. Not even the most sceptical employer, Burson thought, could fail to realize — on reading what he had written — that the applicant was, indeed, a master of all things photographic. Burson mailed the letter and went to bed, confident that his remaining days in the "Pyro Prison" — as he had facetiously named his place of employment — were, indeed, numbered.

The next day, comforted by the thought that he would soon be rid of the wretched crew that made his life so miserable, Burson grinned his way through every trial. When the foreman scolded him for neglecting to stop down to U. S. 128 — as he was told to — before giving that 8 x 10 plate a seven-minute exposure, he merely smiled. Later in the day, when the boss became angry at finding seven filled printing-frames standing in the sun — where Burson had for-

gotten them since early that morning — he merely walked away as though the matter were not worth arguing about, and left the boss almost tearing his hair.

"Keep it up while the going is good, you old discourager of rising genius," Burson growled, under his breath. "You'll not have the chance very much longer."

About an hour later — on meeting the boss accidentally in the aisle — Burson noticed that he had gotten over his angry spell. He smiled broadly and gave Burson an ingratiating look.

"Wants to make up for his outburst a little while ago, I suppose," Burson thought, as he noticed the friendly glance; "but it's too late now. I'm through here, and he might as well find it out now," and, with head held high and gaze averted, he hurried on.

The day seemed endless, but six o'clock came finally and Burson rushed home. As he opened the front-door, his eyes sought the mail-box in the hall. It contained a letter — he could see the white gleam from where he stood. With trembling fingers he opened the box and in a moment held the letter in his hand. One glance at the envelope, and he threw it to the floor in disgust. The letter was from his club, and he knew that it contained a message telling him that he was in arrears. As if he could pay club-dues on the salary he was now getting! Then, hoping against hope, he opened the box again and peered anxiously into every corner, but there was no other letter.

"I know what it is," he consoled himself. "They're waiting for other applications to come in. But they're foolish," he went on; "they ought to be able to tell from the way my letter was written that I'm the man for that job. The quicker they realize it, the sooner will I be hanging my hat in their studio."

By a sheer effort of will, Burson grinned his way through the trials and tribulations of another

day, and when it was over, he hurried home. Again he noticed the white gleam of a letter as he opened the front-door, and, with a silent prayer that it would be the one he was expecting, Burson opened the mail-box and took out the letter. One glance told him that his prayer had been answered. He recognized the envelope as the one he had enclosed with his application — "for your convenience in answering," as he had worded it in the last paragraph.

Hastily ripping open the envelope, he drew out the single typewritten-sheet and spread it open. The letter-head, at first glance, seemed like one that he had seen somewhere before; but Burson was in too much of a hurry to stop to analyze the impression. The text of the letter was what he was after, and he dropped his eyes eagerly upon it. He read the lines hurriedly. Then his brow puckered into a frown and, with fingers that had become suddenly numb and cold, he held the sheet closer to his eyes and re-read the lines slowly. When the words had become well impressed upon his mind, he glanced up at the engraved heading of the sheet. Now he understood why it had seemed familiar to him. The letter was from his employers, and read:

"We have your letter of application — asking for the chance to be your own successor — in which you state the qualifications that should entitle you to the job. We regret very much that we cannot agree with you regarding the ability you so generously ascribe to yourself. We will say this, however, that if you possessed one-half of the knowledge and skill that your letter says you do, we would never have inserted the advertisement that you so unfortunately answered."

"Well, there's one satisfaction I'll never give them," Burson muttered defiantly, when, after several moments, he had regained his composure; "they'll never be able to say that they discharged me. I'm going to write them a letter to-night, telling them that I resign!"





# Toning Developing-Papers

WURM-REITHMEYER



FOR many — one might say for most — purposes the cold black tone of ordinary developing-papers is poorly suited. For purely technical work the black may pass; but if a pictorial effect is desired the cold tone must generally be changed. For most landscape motives, as well as for portraits, the warmer brown tones are much more suitable. The production of these tones has therefore for some time aroused the greatest interest among amateur and professional photographers, and there is certainly no lack of different methods for producing tones that lend pictorial effect to the prints. In all recent textbooks numerous good formulæ are to be found, and the toning of bromide papers occupies a large space. It may seem, therefore, superfluous again to take up the subject; but it is just this abundance of material that makes it difficult for those who have neither the time nor the means to make personal experiments to be able to select from the mass of formulæ the one most suitable for the object in view.

Most photographers do not inquire what tones may be obtained by such and such a process; but, as a rule, they want to know how a certain definite tone-color can be produced in the simplest and surest possible manner, without the necessity to buy a lot of expensive chemicals.

With these requirements in mind, the following formulæ have been worked out, based upon the well-known and generally employed indirect sulphur-toning method, in which the metallic silver forming the black print in the gelatine coating of the paper is changed to halogen-silver (silver bromide, silver chloride, etc.), and this changed afterwards to a stable combination with sulphur. By employing a weak sulphide solution (sodium, ammonium or other sulphides) a very pleasing warm sepia-tone is obtained.

If it is desired to vary the tone, this can be done by adding a salt of mercury (bichloride) either to the bleaching-solution or to the sulphide toning-bath, or by adding Schlippe's salt (sodium sulpho-antimoniate); or even by using a bath of the Schlippe's salt alone, the tone may be varied from light sepia to brick-red. The use of mercury-salts, however, is not to be recommended, because the tones are somewhat uncertain, and, besides the doubtful stability of the print, there is more or less strengthening with the increase of the mercury-salt.

In order to get deep-brown to warm black

tones, the print is treated *before* bleaching for about fifteen minutes in a weak sulphide solution, which is again washed out. This treatment does not make any perceptible change in the print; but, on the other hand, when placed in the bleaching-bath it does not bleach out, but changes to a comparatively strong brown color. In this preliminary treatment in the sulphide it is not necessary to rock the tray constantly; it is sufficient to turn the prints over frequently and to see that they are always covered with the solution and that they do not stick together, otherwise the toning will be irregular.

As sulphide, besides Schlippe's salt, we use barium sulphide, because in the crystallized form it keeps much better than the generally used sodium sulphide, and hence more certain results are ensured, and because it has a much less disagreeable odor than the otherwise quite satisfactory ammonium sulphide. Barium sulphide does not dissolve readily in water; it is rather precipitated by it, giving off sulphuretted hydrogen at the same time. The best way to prepare the toning-bath is to put the quantity of sulphide in a bottle with some water and shake vigorously; this forms a milky liquid which can either be filtered or allowed to settle, using the clear portion for toning. This toning-bath loses its strength gradually, and should therefore be prepared just before using. The solution of Schlippe's salt also is unstable, and likewise should be prepared only when wanted for use.

In regard to the character of the prints used, the most suitable are those harmoniously strong, with clear highlights and deep shadows. Gray, overexposed, as well as hard prints, are not suitable for toning. The best results are obtained when the exposure is so timed that the print can be developed fully, until longer action of the developer adds nothing to the strength and development seems to come to a standstill. Do not dilute the developer too much, but use it at the strength suitable for developing plates.

The separate solutions are made up as follows:

## (a) Bleaching-Bath

|                        |               |            |
|------------------------|---------------|------------|
| Water                  | .....500 ccm. | 16 ounces  |
| Potassium bromide      | 5½ grams      | 75 grains  |
| Potassium ferricyanide | 17 grams      | 280 grains |

If kept in the dark or in a brown-glass bottle, this solution will keep indefinitely, and can be used till exhausted.



THE SAN ANTONIO RIVER

W. H. HALL

(b) *Toning-Bath*

|                       |                      |           |
|-----------------------|----------------------|-----------|
| Water . . . . .       | 500 ccm.             | 16 ounces |
| Barium sulphide . . . | $2\frac{1}{2}$ grams | 35 grains |

(c) *Toning-Bath*

|   |          |           |
|---|----------|-----------|
| Distilled water . . . .                     | 100 ccm. | 3 ounces  |
| Schlippe's salt (sodium sulpho-antimoniate) | 1 gram   | 15 grains |

1. WARM BLACK

The toning-manipulations are as follows: 1, Immerse print in toning-bath (b) for about fifteen minutes; 2, Wash; 3, Bleach in bleaching-bath (a); 4, Wash; 5, Redvelop in any desired developer (can be done in daylight); 6, Wash.

2. COLD SEPIA

1, 2, 3, 4 and 6 same as for tone No. 1; 5, Tone in bath (b).

3. WARM SEPIA

1, Bleach in bath (a); 2, Wash; 3, Tone in bath (b); 4, Wash.

4. DARK BROWN

1, 2 and 4 same as for tone No. 3; 3, Tone in 3 parts of (b) and 1 part of (c) mixed.

5. YELLOWISH BROWN

1, 2 and 4 as in tone No. 3; 3, Tone in equal parts of (b) and (c) mixed.

6. RED

1, 2 and 4 same as in tone No. 3; tone first in

bath (c) and then for a short time in (b), to effect a complete change of the halogen-silver.

If with the Schlippe's salt the coating of the paper inclines to yellow, this can be removed by immersing the print in a five-per-cent ammonia-bath.

If bath (b) is used when it is not clear, a light deposit is apt to be formed on the print, but this can be removed easily by rubbing with a moist wad of cotton-wool.

As is well known, the composition of the emulsion on the paper plays an important role, and the tones of the various makes of paper will consequently vary more or less. These variations are much greater in the gaslight-papers than in the bromides, and the same tones cannot always be got on both kinds. Tone No. 3, for instance, does not work well with gaslight-paper, giving a clayey color instead of warm sepia; but the formulæ using a preliminary bath in the (b) toner generally give good results.

*Photographie für Alle.*

[Particular pains have been taken to investigate the formulæ and toned prints mentioned in this article. As a result, it is believed that the amateur and professional will derive pleasure and profit by further individual investigation. The effects are varied and attractive.—EDITOR.]



# Turning Night Into Day

FRED. SUTTER



DON'T mean in the way Bullard's immortal stein-song tells it, and therefore warn you that visions of conviviality form no part of this supper-turn. "Taking photographs at night" would be a good caption, or, in these hold-up times, "Taking chances" would be equally near the mark. As a rule, the amateur has very little daylight in winter in which to exercise his anastigmat, and I want to encourage him in the practice of taking it out after dark.

The books say that the best time to make pictures is from 10 A.M. to 3.23 P.M., or some such hours. Piffle! The best time to make pictures is about 8.30 P.M., when the winter-stars are twinkling (copyrighted), the snow creaking under foot and home-win-dows shining with the evening lamplight. That's the time! You don't need an actinometer, tables of exposures, a split-second shutter, or anything like that. Almost any old box will do, for the exposure will be from five to ten minutes, and it doesn't matter very much whether you give it a minute or two, more or less, apparently. The most important equipment is a warm overcoat and arctics, and then, if it is raining or snowing, an umbrella will help some.

There is one thing, however, that is useful, and that is a finder made in the form of a wire frame attached to the camera, which you look through to see what is included in the picture. This kind of a finder has never been supplied with American cameras so far as I know; but it is the only finder that is of much good. The next best finder is the direct-view finder, which consists of a concave lens, through which the subject is viewed, easily and very accurately.

Taking pictures at night seems paradoxical, and one's friends always express surprise that it should be attempted. And a further paradox is this, the chance of making a successful picture is very, very much better than with a daylight-exposure. The reasons are these: the illumination is supplied by the street arc-lights, and is, therefore, virtually always exactly the same, at all hours and on any night, so that exposures are not apt to vary. Furthermore, the detail which precludes a daylight-picture simply does not exist at night. Then, again, as a rule, night-pictures are strong pictures, and you can violate more rules of composition and get away with it than by the critical light of day.

Don't worry about the light or lack of it. If

you can see it, you can photograph it. This is a good rule to bear in mind. Sometimes you will be amazed at the way the camera has shown delicate values which the eye did not observe at the time, such as the tracery of tree-tops against the faint glow in the sky that hangs over every city at night.



THE APARTMENT-HOUSE

FRED. SUTTER

I don't see how there can be real art without the human element. There is a lot of nonsense written about the large open spaces of the West, the refining influence of nature, and the lonely pioneer is held up as a model of all the virtues. Like most of our accepted theories, this one also does not conform to the facts. You will find among cow-punchers and out-post folk, generally, a lot of sturdy characters just the same as these are found everywhere else on earth, and the rest of the crowd is the same old run-of-mine humanity, tapering off to a pretty raw edge. Nothing to the nature-stuff. The chap whose character is not built up by contact with his fellow-man might

stand on the rim of the Grand Cañon till he fell apart, for all the real good it would do his soul.

Your picture simply must have the human touch, otherwise it is merely a representation of trees and rocks and water, and all the perfectly useless equipment of nature. Don't make the mistake, however, of thinking that a human animal roosting somewhere on the landscape gives it the human touch. It generally does not. Better have him make some footprints in the snow and then remove himself and brogans from the vicinity. Imagination will do the rest. An apartment-house by day has about as much poetry in its appearance as the side of a barn, and yet at night the lighted windows suggest the hopes and joys of family-life, and the result is a picture. "Christmas-Eve" without the holly-wreaths is merely a bit of house-and-snow-covered bushes, together with lighted windows — a fair picture, perhaps; but it needed the wreaths



TURNING NIGHT INTO DAY

FRED. SUTTER

to carry us back two thousand years and tell the Christmas-story. Sometimes the night is so beautiful that it hurts. Don't be a clod. When you look out after supper and feel the dorsal bristles rise — which is the real test of your soul's power to appreciate beauty — don't let it go at that. Get out the old box and prove that you have a soul! This is all very well, I hear you say; but suppose we get down to the proverbial

brass-tacks. Fine! That's making progress! And now to business.

The easiest picture to make is one in which the source of light, that is, the street arc-lamp, is included, such a one as, "Eight Inches by Morning." The camera should be set up so that the arc-lamp is hidden by a tree-trunk or large branch. Other more distant lights should be shielded in the same way. Lighted windows are what you want in the picture, provided no unshielded bulb is visible. The main idea is that all sources of light should be hidden. The expo-



THE QUIET STREET

FRED. SUTTER





CHRISTMAS-EVE

FRED. SUTTER

sure should be about five minutes with the ordinary lens wide open, which is about F/8 to F/11. Develop the picture in the regular way, and don't pass judgment on the negative till you have printed it. Night-negatives look altogether different from daylight ones.

Look out for automobiles, and when one passes, hold your hat or the slide in front of the lens, else the headlights will make light-streaks across the picture. You do not need to close the shutter or hold the slide *against* the lens. Disregard pedestrians, for a dozen persons can walk by, but there will be no trace of them in the picture. During exposure in one of my pictures, once, a mail-collector drove up to the box, transferred its contents to his cart and then drove away, but the picture does not prove it, for he made absolutely no impression. A point to be remembered is, that time taken out for passing automobiles should be added to the exposure. If ten machines have passed, and you have shielded the lens, say, ten seconds for each one, your exposure is robbed of nearly two minutes.

Pictures like "The Apartment-House" should have a longer exposure, for, as will be seen from the picture itself, the illumination is weaker than is the case with subjects in the immediate vicinity of the arc-light. The exposure for this picture was eight minutes, with the lens opened to F/8. "Christmas-Eve" was made in seven minutes, with lens-opening of U. S. 8, or about F/11.

Use a fairly fast plate, such as Seed 30 or 27 or Standard Ortholion. There is nothing to be gained by opening up a fast lens to F/4.5, for the short

depth of focus at such openings will spoil your picture. That is to say, the trees forty-five feet distant will be in focus, for example, but the objects nearer or further away than this will be blurred. A tripod is used in any case, and a minute or two, more or less, on the exposure really does not matter. Lens-openings of F/8 to F/11, which correspond to the large opening in the ordinary cameras, such as the Kodak, give the best pictorial results.

"Turning Night into Day" was given four minutes, a Seed Graflex plate, and an F/6.8 opening being used, as speed was important lest the patient individual posing might get tired out and shift his position. If you have not yet attempted night-pictures, be assured that you will find the work extremely interesting.

You do not have to wear out shoe-leather; look about you, close to your home. Of the six pictures that accompany this article two were made from my front-porch, three from the sidewalk immediately in front of the house, and the other one, "Dinner-Party," from a point directly across the street. There is plenty of matter all around, any of it good enough to practise on and much of it fit for a good picture. There is a little cobbler-shop on a side-street that I intend to get some night when there is snow on the window-sills, when icicles are hanging from the eaves and the little cobbler is bending over his work by the light of one 150-watt Mazda (which will be supplied by myself). I say some night, for as the shop is located three blocks away, it is rather beyond my usual range.



EIGHT INCHES BY MORNING — A DINNER-PARTY

FRED. SUTTER



# Copying With a Magnesium-Ribbon

MILTON M. BITTER

**F**OR copying, the magnesium-ribbon has some decided advantages over daylight. For instance, you can work wherever you like; you can move, direct and reflect the light to suit your needs; and, inasmuch as it is always of the same intensity, you can duplicate an exposure at any time by simply burning the same length of ribbon, if the other original conditions—bellows-extension, etc.—are the same; or if they are not, you have a fair working-basis to calculate exposure. This is of great advantage to amateurs.

In making a long daylight-exposure of an interior with a small stop, you may walk directly into the picture—if you keep in motion and cover up collars and cuffs—and illuminate a dark corner or heavy shadow by throwing a stream of light into it from a burning magnesium-ribbon, lighted from a short piece of candle fastened to the interior of one side of a box. Care should be taken to keep the box in motion and always in a position so that the direct light will not shine into the lens. To do this, a slow forward movement of the box must be maintained, so that the smoke will fall behind the box into the shadow and not catch the illumination from the front.

The magnesium-ribbon, too, is very serviceable to make home-portraits of a subject that is well braced—with head resting on one hand, for instance—or a “still-life” picture such as a vase of flowers. Through its use for these subjects, the necessity of reflectors is obviated, since whatever illumination may be desired on the shadow-side may be obtained with a second, very brief exposure. Once you have found the correct exposure for subjects of this kind—with any particular plate—you may be assured of correct exposures in the future.

Indoor snapshots may be made by using a sufficient length of ribbon, doubling or trebling back the strip and twisting it into one cord-like piece. This will give a very intense light. A thin diffuser may be used to advantage.

The ribbon is particularly valuable, too, to copy pictures that have considerable grain, inasmuch as brief exposures may be made on top, bottom and sides, thereby eliminating the shadows of the grain. The exposure, however, may as well be made continuous by moving the ribbon in a circle, being careful to keep it at a sufficient distance from the center to avoid reflections, which would spoil the result.

In making the copy of the painting, “Mater et Puer,” the large and heavy glass was not removed from the picture-frame. After focusing with a large lamp set close to the picture, which was standing on a box *flat* against the wall, the lamp was removed and a candle lighted. All other lights in the room were extinguished. Then the candle was held at various distances from the side of the camera, a few inches back of the lens, while I watched, on the ground-glass, the position of *the image* of the candle-flame as it was reflected back into the camera from the glass on the picture. When the image of the flame passed off the ground-glass I noted carefully the distance from the candle to the camera. This showed me how far from the camera I must use my ribbon in order to avoid reflections. On the opposite side of the room—directly facing the picture—was a white-enamel washstand, and the picture-glass acted as a mirror. When the exposure was made my assistant held the dull side of a focusing-cloth *directly back of the camera* while I burned the ribbon. Two exposures were made—one on each side of the picture—by moving the burning ribbon in a semicircle from a position well above the camera to the floor. The lens was closed between the exposures so that in passing from one side of the room to the other with the lighted candle the reflection would not be thrown into the camera. The ribbon was ignited at the candle and held over the candle-holder—but not over the flame—in order to catch any hot ashes that might fall. This point should be emphasized, else, in attempting experiments, a valuable rug, carpet or other furnishing might be damaged or a fire started.

Five inches of ribbon were used for each exposure. The length of the ellipse is thirty-two inches and the picture was about fifty-six inches from the camera. The plate was a Cramer Portrait Isonon Isochromatic. The Isonon is rated by Cramer as of about the same speed as the Crown, which would seem to indicate that a slow plate is not absolutely essential to this kind of work. The plate was developed with a somewhat concentrated pyro-acetone developer. Inasmuch as the white paper on which the picture was made had become slightly yellowed with age—over twenty years—a 2-time color-screen, Cramer Isos 1, was used. The photographic print is on Professional Cyko, semi-matte, developed with amidol. The result speaks for itself.



MATER ET PUER  
MILTON M. BITTER



# The Anastigmat

WILLIAM FINDLAY



HAT was an interesting little article in the November number of PHOTO-ERA by Grace C. Rutter, entitled "Adventures in Home-Portraiture."

The only regret that one might have is that the picture of the little child, that she put herself to so much pains to portray so lovingly, did not accompany the article. The homelike quality of the article, and the unassuming style of the writer, appealed to me, as it must have to many other readers; but what came home most personally to me was the longing expressed by Miss Rutter that with an anastigmat lens she could vastly improve her work. This is not a new longing. Doubtless the desire has entered into the hearts of most enthusiastic amateurs. I know that it entered mine, and my experience in this particular may be of benefit to others. Hence these lines to other photographic workers.

I felt, too, that if I had an anastigmat I could work wonders, and I had my desire fulfilled. I sold a number of my negatives — seascapes they were — to an eminent firm of publishers, and with what I then considered a windfall was able to open negotiations for the purchase of the lens. Before proceeding with the story further, I may say that many a time and oft I have regretted parting with at least three of these negatives, and I pass on the hint to any amateur who cares to take the advice, viz., on no account to part with negatives. By doing so one parts with the copyright, and though the dealer may make a handsome profit out of them, and reproduce them in any form he thinks fit, the former owner has no future claim on him. When bargaining, make your stipulations in a business-like manner, and have an agreement as to the form of reproduction *from a print* — but keep your negatives. There may be pictorial possibilities in them that do not reveal themselves to you, but which will dawn on you as your knowledge is extended. Many chance snapshots of yesterday are salon pictures of to-day. This fact should be remembered.

But to the story of the anastigmat lens. The price was not exorbitant, but still beyond my means. However, by exchanging a good old rectilinear lens which had been the means to many of my best seascapes, I was able to purchase it. On fitting it to my camera, I found that its focal length was an inch shorter than the old rectilinear. It covered the plate sharply at the aperture of F/6, as stipulated, and I proceeded to conquer new worlds. The first examples obtained by it

were up to expectations — indeed, one of them yielded me my first medal. However, as time went on, I longed for my old lens. In seascape work — and working against the sun, too — it was found that even with the shortest exposure the shutter was capable of making —  $\frac{1}{100}$  of a second — and using the lens at its full aperture, overexposure resulted. Stopping-down had to be resorted to. If stopping-down had to enter into calculations, would I not have been better off with my old lens? Then, again, the boats which were invariably included in the composition were much smaller on the plate by reason of the shorter-focus lens. At that time, enlarging had not been resorted to, and it was a bitter disappointment that in the contact-prints the principal features appeared so small and insignificant. However, with the advent of an enlarger — another desire that comes to most of us — my regrets on this score vanished. But still I deplore parting with my trusty rectilinear, and often wish I could have it back.

The anastigmat will undoubtedly help Miss Rutter in her home-portraiture, and with so much enthusiasm as she unconsciously displays in the course of her charming article, she will do good work with it. However, the point I wish to emphasize is that if one has become accustomed to a good lens, and has obtained good work with it, one ought not to discard it lightly, even though one is in the fortunate position to be able to purchase an expensive anastigmat.

My friend, Mr. William Norrie, has soared to the anastigmat lens, and though I grant that the work he produces with it shows distinct individuality, and probably more "air-space," yet I doubt that with his new love he will excel the grandeur of his "Fraserboro Sands," or the deep tragedy of "She 'll Plough the Waves No More," which pictures have been published in these pages and, doubtless, have been admired by readers. They were taken with an unpretentious slow lens which also yielded other masterpieces. I hope I have at least pointed a moral, if I have failed to adorn a tale.

[It must not be assumed that Mr. Findlay would discourage the purchase of an anastigmat lens. He writes solely of his own experience. No doubt, if he had obtained an anastigmat lens of the same focus as his rectilinear, he would have had no cause to complain. Excellent pictures may be made with a rectilinear; but the anastigmat yields the better results.—EDITOR.]

# Color-Photography



THE real history of photographing in colors and various fairly successful attempts at picturing natural colors antedates ordinary photography, discovered in 1839, almost forty years. For the principles, the knowledge of which makes it possible to take pictures in color to-day, we are indebted to discoveries and analyses of light made by Sir Isaac Newton in the seventeenth century. Practical solution of it is a very modern achievement, however.

All photography is based upon the principle of light-action on silver, the latent image impression upon salts of silver, being reduced to metallic silver, cleared and made permanent by chemical action, resulting in an authentic record, for future reference, study or possible duplication by hundreds and thousands.

This image impression is secured by using a lens, camera, shutter and plate, comparing favorably, if not *originating*, with the arrangement of the human eye. The crystalline lens, receiving and inverting the image upon the retina, corresponding to the sensitive plate — cyclids acting as shutter, and the iris, like our diaphragms or stops, regulating the quantity and intensity of light and sharpness of the image. The primary color-sensations recognized by the retina are those used in securing color and color-combinations on the photographic plate.

All color-photography methods to date, then, secure the picture in monochrome, or *one color*, by the above-mentioned methods, supplemented with dyes or transparent pigments, as few in number as possible, yet capable of producing all colors — and doing so automatically. In order to grasp the various applications of these principles, it is necessary briefly to review the spectrum, and its relation to this, and scientific tests in general.

Newton's discovery was that, instead of being a simple thing, white light is really a compound, and by refracting a ray through a slit and prism, he found that it consisted of a great number of differently colored rays. These he grouped into a spectrum or scale of seven colors — violet, indigo, blue, green, yellow, orange and red, which *always* occur in white light, and *always* succeed each other in this *immovable* order. Later scientists reduced this to six, omitting indigo. By blocking out all but one and interposing from another spectrum, he tested out individual colors, finding which were produced by mixture and which were incapable of further division. He, and later scientists, resolved these back to three

primary colors (originally thought to be red, blue and yellow), to those which we are now taught are the three elementary color sensations recognized by the optic nerve, and which by admixture of various degrees produce every shade and hue in nature. These are *red*, *green* and *blue-violet*. Demonstrative proof of this is usually made by isolating these three from different spectrums, and either by lapping them or reassembling through a lens, white light is instantly produced.

Difference in color of the spectrum-rays is due to the number of vibrations producing each, possibly evidenced by their distance from the prism and various widths, violet having the most, red the least, the exact proportion in 1 inch of white light being 70,000 violet, 45,000 yellow and 30,000 red, other colors in proportionate ratio. When we consider that white light has a velocity of 180,000 miles a second, modern theories of wave and vibratory principles are too far-reaching and incompletely developed a subject to take up in detail here.

It is well to keep in mind that, when reduced to figures, *wave-length* and *wave-vibrations* are apparent contradictions. Violet has the shortest *length* but the most vibrations, whereas red has the greatest length but the fewest vibrations, like ripples and billows of water, respectively; or the violets might be compared with the high-sound vibrations of the sopranos, whereas the long waves and fewer vibrations of the reds are not unlike the basses in music. Also it is well to add, in passing, that light-waves are of great variety, some producing heat, some electricity, some chemical effects, some X-rays and others radium rays.

Certain fixed dark lines which separate the various colors of the spectrum were discovered by Fraunhofer in 1814. At the time he divided these into ten fixed sections in any spectrum, and later subdivided these into 600. With improved instruments of to-day, recent workers have mapped out thousands. Therefore, these Fraunhofer subdividing lines, together with later discoveries disclosing additional rays above the normal spectrum, called *ultra-violet*, the vibrations of which are too rapid to be recognized by the eye; and *infra-red* rays below the normal spectrum, with vibrations too slow to be sensed, give an accurately reliable standard for thousands of analyses in the arts and sciences, particularly chemistry and astronomy. The final test for *colors* is spectrum-analysis. With the primary colors, using black to produce *shades*, and white to make *tints*, the Standard Dictionary names and gives mixtures for 487 different colors.



Spectrum-colors do not correspond to painter's mixtures because pigmentary colors are never free of contamination, being affected by the medium carrying them. This is particularly true of red and green, which in the spectrum produce *yellow* in combination. In pigments this would result in almost black.

"We recognize color-sensations only as *reflected, absorbed, diffracted* or *dispersed*; in other words, we see an object which is not itself luminous, like a lamp, because it reflects light, and we recognize its *color* by its absorption of certain colors from white light, *reflecting* the rest." Were this not so we would go blind.

White is the *reflection* or *combination* of all colors, whereas black is the *absorption* or *absence* of all colors. White is *positive*, black *negative*. A complementary color is any one which, when mixed with another, produces white or nearly white. In a sense these might be termed positives and negatives in color, like black and white. Newton attempted to establish a rule for recognizing them by bending the spectrum into a semi-circular or horseshoe shape, colors on opposite sides being complementary to each other, and Maxwell, a recent scientist, modified this into a triangular shape with green, red and violet at the apexes. By disregarding mixtures and keeping the primaries only in mind, one may simplify the idea of complementary colors, viz., red and green are complementary; these two combined produce yellow which must be complementary to violet, etc. The high velocity of the violets and blues, and recent proofs that ultra-violet light also has great actinic qualities affecting silver-salts, explain why these colors take *lighter*, whereas red, yellow and greens take *darker* than the eye senses them; also why violet and blue lights are used for quick photography, whereas deep red and orange lights may be used for darkroom illumination.

Therefore in ordinary photography, in order to render a more correct record of the proportionate brightness of things as the eye sees them, regardless of color, plate-makers incorporate pink, yellow or green tints in plate-emulsions to assist or to make up for the lower-tone colors, or to give these handicapped ones a more equal chance to registering correctly in monochrome. These plates are termed Orthochromatic (correct color), Isochromatic (equal color) or Panchromatic (all color), the last being made specially sensitive to red and green and developed best in total darkness. With these it is still necessary to use yellow screens of various hues in front of, between the lenses or back of them, to absorb the excess violet and blue rays.

When we recall that we recognize color be-

cause we see it *reflected* and the rest of the spectrum *absorbed*, also that red and green produce yellow, it will readily be seen that a yellow screen *transmits* its own color, yellow, as well as red and green rays, but *absorbs* blue and violet.

Coming to photography in all *colors* or *color-photography*, bear in mind that a color, being transmitted through a screen of its own shade, has its action upon silver regulated by exposure up to a point where it matches, then over-matches, by overexposure. Having matched or recorded its own color, the result is that the silver-salts are blackened over so that in the negative it is covered or blocked out, and only its complementary color shows. In a positive the real color shows, and the complementary is blocked out. Being forced to cut down the over-activity of the blue and violet rays with yellow screens, and filter all colors through their own media, which has had to be done at the expense of exposure, one can appreciate the difficulties that hosts of scientists have had to contend with to obtain practical results. Yet all color-processes had to be built up on this intricate registration of the various primary colors, allowing for their proper individual exposures, and to judge by their complementaries in the negative, what values to expect in the positive.

In the final positive, clear glass, or massing of the primaries, produce white, silver, darkened by the light, produce the blacks, and the pigments or dyes incorporated in the plate or screen automatically blend themselves to record colors as received up to the matched point as mentioned above. Underexposure darkens and overexposure lightens them. All dyes used must be transparent to correspond to spectrum-colors, and be kept from dissolving through the necessary developing-solutions required to bring out the actual picture, and still remain non-fading by prolonged and future light-action. These are the basic principles of *three* present-day processes. Two others make use of two and three screens dyed to record each primary color, filtering them out of the images thrown on two or three plates exposed simultaneously. The resulting positives are then dyed, and by superimposing them all colors are automatically rendered visible.

The McDonough-Joly process photographs through a sheet of glass ruled with parallel lines alternating red, green and blue, at a gauge of 300 to the inch, onto a sensitive plate. The resulting negative leaves the plate transparent to the complementary colors, a positive from this leaving it transparent to the real ones. By placing this in contact with the original mechanically ruled screen, or one identical, all colors and their various combinations become visible. The same



PORTRAIT OF MRS. G.  
P. A. OF A. SALON, 1916  
J. D. STRICKLER



idea was applied to silvered paper ruled as above, and by perfect register all but the true colors would be blocked out in printing.

The Lumière process consists in spraying each plate with a microscopically fine deposit of colored potato-starch grains, about 20,000 to the inch, each 100 grains carrying a proportionate mixture of 45 green, 28 blue-violet and 27 red-orange deposits; a waterproof-coating follows, and over this a panchromatic emulsion of gelatine. The negative is made through the glass side, forcing the image through the finely stippled colors before registering on the sensitive film, and, after development of the negative, is instantly chemically treated and thereby reversed to a positive, without clearing or fixing. Each plate carrying its own colors and filters; they cannot be duplicated except by taking the scene over again on a new plate under virtually the same conditions of exposure.

The Paget process is a cross between the above two — a mechanically stippled-in color-screen being used in front of the plate as a taking-screen, a transparency made from the resulting negative being then viewed through an identical color-screen which is bound to it in register, all colors being thus rendered visible. Its distinguishable feature is that having the color-filter separate from the plate makes it possible to duplicate at will and with uniform results.

The Hess-Ives or Hicrome process consists in exposing three plates simultaneously, the plates being carried in a one-piece triple unit, and so arranged that at time of exposure the red recording plate is in the back, film to film against the green-recording plate, whereas the blue-violet plate received its image from a reflecting, transparent mirror brought into 45° angle to it, after attaching plateholder to the camera. The back of the green-recording plate carries a red filter affecting the back plate. The plates are developed simultaneously, and final positives on transparent celluloid dyed to correspond and superimposed and cemented together, resulting in full-colored picture. This process permits any number of duplications from the original negatives and is a great advantage.

It is evident to the reader of what great commercial value color-photography will become, aside from its highest expression in portraiture. It is already of inestimable worth in advertising sales of paintings, objects of art, rare furniture, stained-glass windows, choice fabrics, tapestries, rare flowering plants, gardens, etc., and to physicians in obtaining accurate records of skin eruptions and peculiar pathological cases.—[Review of a paper read at a recent Rotary Club luncheon by Lou Merillat, of Kingston, N. Y.]

## The Need of Translations

AMONG the numerous factors that, combined, have put us at a disadvantage in our recent relations with Germany, has been our neglect of the progress made in certain scientific directions in that country. The Germans have never neglected the matter of publication; but up to quite recently their publications were closed books to everybody who could not read German, and most of them are so still. While everything of scientific importance published here was immediately recorded and translated, or abstracted, in Germany, we did nothing of the kind excepting in a most ineffective and useless fashion. Chemistry has been treated rather better than optics in this respect, but that is only because it could hardly have been treated worse. The result has been that English students have been kept years behindhand in knowledge. It may seem hardly credible, but it is a fact, that the Gauss theory of thick lenses began to be brought prominently before optical students here only about fifty years after it was first published, and just when the newer Abbe theories were about to replace it to a large extent. These later theories then took about sixteen years to find their way here in English, and in anything like adequate form. It is fairly evident that if English students are to be kept back for periods like this, it is difficult for any general progress to take place. The translation and publication of such works as Czapski's theory of optical instruments (there are many others equally worthy) would probably not be a paying event to an individual undertaking it, but the neglect is a dead loss to the nation at large, and a loss that ought to be avoided. We hope that in the general upheaval of things now taking place, some steps will be taken to remedy this past neglect, so that every English student may at least have the chance to start on equal terms with the German students, who doubtless will survive the war.

*The British Journal of Photography.*



PRAISE by friends and relatives of a person's untried ability in art, however sincere, is more of an obstacle than a help, unless based upon sound, practical knowledge; but "approbation from Sir Hubert Stanley is praise, indeed."—W. A. F.



QUALITY has nothing to do with the photographer achieving pictorial and original photographs. His is an automatic process, as far as the photographer is concerned; and it is the artists who are responsible for the brilliant results.

HUGH CECIL.



## EDITORIAL



### Camera-Care

THE element of regular, periodical inspection of an institution or a piece of machinery is a guaranty of its welfare and efficiency. The man who buys an expensive automobile finds it necessary to have it overhauled by an expert technician once a year, and pays a large fee for such a service. A good pianoforte needs a similar inspection at the hands of an expert, by whom the instrument should be cleaned and tuned, and rusty or broken strings replaced; but tuning no less than four times a year is indispensable if the piano is to stay in good condition. The wise owner of a good set of teeth has them examined by a reliable dentist at least twice a year, so that impending trouble may be averted. It is easy to see that neglect to care for these things spells possible consequences of a serious nature. Some part of the main engine in a large manufacturing-plant may give way at any moment, without the least warning, and not only shut down the power, but cause a serious accident. An inspector of buildings—in an ill-governed municipality—slights his duty, and an uninspected, defective wire or a pile of rubbish starts a fire which may terminate with disastrous results. Numerous other cases could be cited to show the importance of frequent and careful examination wherever its omission would be likely to prove dangerous or cause a profound disappointment.

This leads up to the subject of care to be exercised in using photographic apparatus—speed-cameras, for instance. Take an intricate and high-priced instrument of the reflecting type, a Graflex or a Soho, with its hidden mechanism. A blow or fall—and the focal-plane shutter, the mirror or the lens is likely to be injured. It will not function properly, although, at the time, this may not be noticed by the user. The faulty results, however, will be the only proof of imperfect response. A negative that is overexposed, or not exposed at all, an image that is blurred, out of focus or partly so, or exhibits results due to a disordered equipment, demonstrates the necessity of a thorough inspection before any important work is undertaken. Such a task had better be entrusted to specialists of recognized ability, unless the owner of the camera, himself, is an expert mechanic. The mechanism of a compound shutter, for instance, is almost as intricate and delicate as that of a watch, and any attempt by

the unskilled user to restore its suspended efficiency, or even to take the instrument apart, might spell disaster.

As to the lens, none but an expert optician can restore the disrupted cement (Canada balsam); but a more serious damage requires the attention of a professional lens-maker, preferably one recommended by the manufacturer or his accredited agent. Then there are the hinges, springs, screws, that are to be cleaned, oiled and tightened—also by an experienced workman.

Thus, as has been shown, a valuable camera should be entrusted to a thoroughly reliable camera-repairer once a year and, certainly, before undertaking any important work in a far-off region. The season for outdoor work *par excellence* is now at hand, and the prudent amateur will lose no time to mend his photographic fences. PHOTO-ERA can help him, for skilled and reliable photographic mechanics are scarce.

### Admired in Photo-Era

A REFINED means of publicity of the work of the professional and the amateur photographer is being afforded by PHOTO-ERA, each month, and is regarded by them as a source of pecuniary profit. There are many high-class publishers of calendars, posters and pictorial designs who are regular subscribers to PHOTO-ERA, and who, when impressed by a particularly attractive picture in its pages, communicate with the Editor regarding the address and character of the author. This information is imparted at once, when the photographer is clearly in the market for the sale of his pictures or negatives. In doubtful cases, the Editor refers the matter to the photographer himself. Many workers are averse to dispose of prints or negatives for commercial purposes through certain well-known methods, preferring to deal with firms approved by a responsible magazine-publisher.

Among the pictorial contributors to PHOTO-ERA who have derived material advantages from this method are William S. Davis, B. F. Langland, Rupert Bridge, S. H. Gottscho, A. W. Dimock, Mrs. Cassidy and Mrs. Durrant. Portrait-photographers, such as Garo, MacDonald, Ellis, Schwarz, Halldorson and Butler, have benefited by an increased prestige, for they seem to regard their work published in PHOTO-ERA as a compliment as well as a first-class advertisement.





# ADVANCED COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Spirit of Christmas Competition Closed January 31, 1917

*First Prize:* R. J. Morrow.

*Second Prize:* Bertram F. Hawley.

*Third Prize:* Anson M. Titus.

*Honorable Mention:* M. N. Bregon, Elizabeth B. Wotkyns.

Special commendation is due the following workers for meritorious prints: Thomas J. Greaney, H. C. Sorensen, Oscar G. Whiting.

## Subjects for Competition — 1917

"The Spirit of Winter." Closes March 31.

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

## Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.



THE SPIRIT OF CHRISTMAS

R. J. MORROW

FIRST PRIZE — SPIRIT OF CHRISTMAS

### Miscellaneous — Advanced Competition

Closes May 31, 1917

WE come this month to the second of our quarterly general topics, when any subject may be entered in the competition and judged "on its merits." The "merits" in these competitions consist less in technical excellence — though that enters into it — than in pictorial quality and excellence of composition. Henry Poore, in the introduction to his book on Composition, which, by the way, is a very valuable one to those eager to improve their work pictorially, quotes the following sentences, which are, if I am not mistaken, even more applicable to the photographer than to the painter: "The painter is a compound of a poet and a man of science," and "It is working within limits that the artist reveals himself."

For instance, the limits of the landscape-photographer are far greater than those of the painter of similar subjects. The photographer must take things as

he finds them — except in some minor details — whereas the painter-man may leave out at will the offending poles that spoil so many subjects for the photographer. Yet, the proof of the artist-photographer is his ability to choose the right point of view; to so work "within his limits" as to produce a well-balanced and pleasing composition, minimizing the defects and accenting the pleasing features. With some fortunate individuals, this ability seems to be instinctive. They could hardly give you a single rule of composition; yet, their pictures show a strong feeling for balance and unity. However, these are the favored few, and a knowledge of the general principles of art is necessary to most people if they are to produce pictures worthy of the name.

A good book on composition is an invaluable addition to a photographic library. An excellent one is that by Henry R. Poore, previously referred to — "Pictorial Composition and the Critical Judgment of Pictures." This is written as much for the photographer



as for the painter, and it takes up all phases of the subject that one is likely to need. Having obtained a definite idea of what constitutes good composition, the reader will find that an excellent way to "clinch" his knowledge is to study pictures — whether good or bad — to make sure that he knows whether they are good or bad, and why. Such self-training will result in a better understanding of true composition, and it will save many a plate from being wasted on a view of no pictorial value.

An excellent little "direct-view finder" may be made by cutting a rectangular opening in a card. This may be made to include more or less of the subject, according to the distance it is held from the eye. It is even better, perhaps, to cut this finder apart at diagonally opposite corners. Then, the two pieces may be slid over one another to vary the shape as well as the size of the opening, and almost any desired effect obtained. This is a great help to locate pictures. Without such an aid it is often hard to tell how certain objects will appear when isolated from their surroundings. A composition must bear the proper relations to its boundaries or frame, and the location of an object with regard to these boundaries has a direct influence on its prominence in the picture. The weakest spot in a picture is the center of the picture space, and objects increase their power to draw the eye as they near the margins. Also, an object in the foreground has less weight than one in the distance. This fact is the foundation of the steelyard-balance; namely, the small weight on the long arm balancing the larger weight on the short arm. On this principle, an object made small by distance proves an adequate balance for a larger, darker object in the foreground. On page 41 of January PHOTO-ERA is a view that illustrates this fairly well. If the dimly defined object in the middle distance were removed, the heavy mass of trees at the upper left would be unstable; but with this distant unit, balance is obtained, and the composition holds together satisfactorily. The spacing in this print is also an interesting study — being a mixture of good and bad. The rule of division into thirds is an excellent one, but division of any margin in the center is not good. At the left in this picture, the division between trees and bank is nearly central. At the bottom the road divides the space too evenly with the bank. However, at the right the margin is well divided, the road using about one-third. At the top, also, the division is good, about two-thirds being taken by the foliage. The vanishing-point of the road is about one-third of the distance from the bottom and the left side, so that on the whole the space is well divided.

It goes without saying, that one object should be predominant over all others in any picture. Emphasis may be given the center of interest, either by position or by contrast of light and dark. A light object against a dark ground, or *vice versa*, has stronger attraction than the same object against a neutral ground. In landscape-photography these accents of light and dark can be obtained almost solely by the play of light and shade. If a good composition is found, but the lighting is unsatisfactory, it is better to wait, if possible, and observe it at different times of day, under different atmospheric conditions — even at different times of the year, when the light falls at different angles. Some views that are unattractive in a broad full light, take on charm and poetic feeling under the level slanting-rays of a low sun, and others are transformed by the illusive mystery of the autumnal haze. One should try to transfer to his print not only the well-arranged objects before him, but the feeling which these objects inspired. In so far as one succeeds in doing this, one has produced a picture and not a mere uninteresting record.

In interior work — portrait or genre — the worker has more control over his material and its lighting and arrangement. In portraiture, the face should be the chief attraction, and the arrangement of the drapery, the placing of the hands and the choice of background or accessories should all be with a view to giving balance and predominance to the head. I know of no better example of oval composition than the picture known as Raphael's "Madonna Gonzaga," and shown at 500 Boylston Street, Boston. The two heads hold the eye irresistibly; yet a line of interest follows down the form of the child to the Mother's beautiful left hand, and is continued by the lights on the drapery of the arm until it draws the eye again to the face. There is no escape from that oval of light.

The triangular composition is possibly the easiest and most frequently used for both single figures and for groups. This is a usual design for the Holy Families so dear to the Old Masters. That of Murillo's is a familiar one, where the child Jesus is standing supported on both sides by the sitting or kneeling figures of Joseph and Mary. Whistler's portrait of his Mother is one of the seemingly simple and natural compositions which is nevertheless wonderfully thought out as to line and balance. The footstool, the baseboard, the picture, the curtain — each is essential to the success of the whole. One has only to compare the original with any of the numerous attempts to copy it, to understand the importance of each seemingly negligible unit in the painting.

The photographer and the painter begin at the opposite ends of the scale in arranging a picture. The painter has blank canvas, to which he adds detail at will; the photographer starts with a superabundance of detail, which he must subordinate in certain parts of his composition in order to give prominence to his chief theme. This he does largely by throwing unimportant parts into shadow and concentrating the light on the parts to which he desires to give emphasis. If in taking a picture it is not possible to bring shadow where it is desirable that shadow should be — he may have recourse to the ever-ready Farmer's Reducer, to subordinate too prominent objects. If the negative is placed for a few minutes in the fixing-tank after treatment, later discoloration will be avoided. It is a helpful lesson to go over one's negatives and see how they might be improved by some after-treatment. Perhaps some subjects that have seemed unsatisfactory can be so improved as to be worthy to be entered in the competition.

KATHERINE BINGHAM.

### Mask Cutting

ONE of the "tricks of the trade" given by Mr. Wade at the Eastman School was a method to cut border-masks and keep them in register. The chief trick is to cut the masks double. That is, instead of taking two pieces of paper, take one piece twice the size desired and fold it once, making a double sheet the size of the mask. Locate your opening the size of the print, a little above the center, and — holding firmly — cut through both pieces with a sharp knife. Now, open the paper and cut the opening on one side as much larger as you wish, to give the border the desired width. Close the mask again, and with a pin make register-marks through both sides at one corner. Two holes on each side of the corner should be made, and then pieces of thin card glued to each half, so that when the print is pushed against these it will be in register with each half of the mask. Without separating, fasten the side with the larger opening to some transparent support, such as celluloid or glass. Take the piece cut from the smaller opening and cut about one-sixteenth of an inch





CHRISTMAS-THOUGHTS

BERTRAN F. HAWLEY

SECOND PRIZE — SPIRIT OF CHRISTMAS

from both length and width, then close the mask, and through the smaller opening fasten this piece to the support of the other side. You can then separate the two parts on the fold, and you have a border-mask that should register perfectly.

If it is desired to make the openings oval in shape, and one has no cut-outs that are of suitable size, ovals of any shape may be cut after this fashion. With a ruler, draw a line the length of the desired oval. On this line make two dots, one as far from each end as a fourth the width of the oval required. Take a piece of string the length of the oval, and pin the ends to the dots so made. Place the pencil inside the loop, and holding the string taut, draw the oval. For instance, if the desired oval is 4 x 6, make the 6-inch line and, as one-fourth of four inches is one inch, place a dot one inch from each end of the 6-inch line. A 6-inch string pinned by the ends to these dots will make your 4 x 6 oval correctly. When two ovals are to be cut, with an even one-half inch margin between, lay out each oval after this manner, one having one inch greater width and length than the other. KATHERINE BINGHAM.

### Photographing by Invisible Rays

THE fact that photography can depict objects invisible to the eye has long been known. Fox Talbot referred to the subject in his book, "The Pencil of Nature," published in 1844, and his own words are: "Among the many novel ideas which the discovery of photography has suggested is the following rather curious experiment or speculation. When a ray of solar light is refracted by a prism and thrown upon a screen, it forms there a very beautiful colored band known by the name of the solar spectrum. Experimenters have found that if this spectrum is thrown upon a sheet of sensitive paper, the violet end of it produces the principal effect; and what is truly remarkable, a similar effect is produced by certain invisible rays which lie beyond the violet, and beyond the limits of the spectrum, and whose existence is only revealed to us by this action which they exert.

"Now, I would propose to separate these invisible rays from the rest by suffering them to pass through into an adjoining apartment, through an aperture in a wall or screen. This apartment would thus become



THE FIRST CHRISTMAS

ANSON M. TITUS

THIRD PRIZE — SPIRIT OF CHRISTMAS

filled — we must not call it illuminated — with invisible rays, which might be scattered in all directions by a convex lens placed behind the aperture. If there were a number of persons in the room, no one would see the other; and yet, nevertheless, if a camera were so placed as to point in the direction in which any one was standing it would take his portrait."

More than half a century later Edgar Senior, of the Battersea Polytechnic, made a most successful portrait under what are practically those conditions. The source of dark — invisible — rays was an arc-lamp, the visible light being cut off at the lens by means of special screens invented by Prof. R. W. Wood; the necessary exposure was five minutes.

The "X-rays" discovered by Professor Röntgen, of Würzburg, in 1896, are invisible rays, and the work they will do is common knowledge.

The photographic spectrum, therefore, stretches out beyond both ends of the visible spectrum, and measures seven or eight times the length of the visible spectrum. Thus, not only do ultra-violet rays give results photographically, but the infra-red as well, although the latter are, of course, at the opposite end of the spectrum and below the visible red.

Prof. Silvanus Thompson, at the Royal Institution in 1896, illuminated a piece of apparently white paper by means of a powerful arc-lamp. A photograph was then taken of the white paper, and the negative showed an inscription written thereon. This inscription had been written upon the paper with an acid — citric or sulphuric — solution of sulphate of quinine, which, being like water in appearance, could not be seen by the eye. The camera detected it, however, because the chemical liquid absorbed the ultra-violet rays, and they were not reflected to the plate, hence they appeared black. The experiment may be made by any one, but it is important that a wet-collodion plate be used and not a modern dryplate. Dr. Gladstone made similar

experiments as early as 1873, and exhibited his results at the Bradford meeting of the British Association in that year.

There are many substances that are fluorescent or that change the refrangibility of rays of light, and which have a light action upon a photographic plate. An unlighted incandescent gas-mantle gives off sufficient rays to make an image upon a photographic plate. Among other substances are radium, mineral uranite, certain salts of uranium, canary glass, alcoholic solution of chlorophyll, æsculin, tincture of stramonium seeds, and of tumeric.—*The Professional Photographer*.

#### Deterioration of Plates

In the course of a discussion of the Royal Photographic Society on the subject of the latent image, Mr. S. H. Wratten mentioned an interesting circumstance connected with the development of some plates which had been exposed in Central Africa, and sent home under deplorable conditions of storage. As he expected, most of them came up fogged and quite hopeless; but two of them, when laid in the dish, kept fairly clean on the top, giving no indication of development. Mr. Wratten thought that this might be due to the shutter having failed to function, or something of the kind, but he proceeded with the operations, giving them the usual time for development, and, on taking the plates out of the fixing-bath, he found to his astonishment that they yielded two good negatives which were quite printable. Both of them proved to have been exposed through the back of the plate. Mr. Wratten thought it possible that, considering the emulsion as a series of layers, deterioration might take place on the upper surface only, and he was inclined to believe that in these cases the top of the plate had gone altogether while the underneath part remained good. Deterioration in the plate might not be true throughout the emulsion.—*The Amateur Photographer*.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY



## Photography in the Theater

WITH color-sensitive plates and the rapid lenses now so frequently used on hand cameras, it is perfectly possible to obtain photographs in the theater, when the scene is one in which the stage-illumination is full on. There are always moments when the action is at a minimum, and the photographer who knows when one of these is coming and can get ready will find that an exposure of two or three seconds is practicable. Such an exposure will be long enough with F/3.5 or F/4 to give a very fairly exposed plate in many cases — the more so, as the lighting employed, generally, does away with anything in the nature of a deep shadow. Any one in the front-row of the dress-circle has a support for the camera all ready provided, and an interesting experiment might be made if the apparatus is available. The best work of this kind which we have seen has been done by specially sensitizing the plates by bathing them in suitable dye-solutions; but a fast panchromatic, without a screen, of course, would do nearly if not quite as well.—*Photography*.

## Time and the Latent Image

FEW photographic workers would have the patience to carry out researches which require a long period of years for their fulfilment; but Mr. H. J. Channon, who lectured before the Royal Photographic Society the other day, on the influence of time upon the latent image, is one of that patient order. He exposed thirteen Ilford quarter-plates in 1894, under identical conditions, giving each of them four seconds' exposure on a landscape-subject, developed one of them immediately, and placed the others in storage, packing them in tissue paper saturated with vaseline. One of these was developed at the end of two years, a second in 1898, and since then one every four years. Seven of these plates have now been developed, and the results placed side by side to show that there has been a more or less consistent retrogression. The last plate to be developed gave a very thin image in place of the dense and vigorous one of twenty years earlier. It is, nevertheless, a respectable negative from which a fair if somewhat flat print can be obtained. While the decay of density in the course of time was apparently continuous, the rate of retrogression during the last twelve years was relatively small.—*The Amateur Photographer*.

## Extemporized Printing-Frames for Films

WE are again indebted to R. M. F., in the *Amateur Photographer*, for a helpful suggestion to film-users. He states that it often happens that the film-worker wishes to print more negatives at one time than he has the number of printing-frames available, and so the following note on an extemporized printing-frame for films will be acceptable. All the requirements are a sheet of glass about the size of the film-negative in use, a sheet of thin card such as is found in the packets of printing-paper, the same size, and a couple of cheap letter- or paper-clips. To print, the negative and printing-paper are placed in contact in the usual way, then the glass is laid in front, and, finally, the card backing and paper slip are snapped over the whole at the top and bottom, holding all together in close contact. The "frame" may

then be put out to print. When examining the paper, in order to determine how far the operation has gone, one clip only should be removed, and the print should not be examined any more than is necessary, or the slipping of negative or paper may be caused. While examining the print, the other end should be held very firmly to prevent this possibility. The above-mentioned method may be employed with glass negatives as well, only in this case the plain glass is not needed; but as film-photography is perhaps a more prolific producer of negatives than plate-photography, it is here that this method is likely to find favor.

## Reversal of Image

WHEN a plate is overexposed several hundred times, a peculiar phenomenon occurs known as the reversal of image — that is, some part or all of such a plate shows a positive instead of a negative image of the subject. In most cases, the positive obtained is flat and often badly fogged. In rare cases, the positive image is remarkably clear and brilliant. From the experiments of Abney, it is known that a preliminary exposure to diffused daylight, the use of a powerful developer and the treatment of the plate with a solution of an oxidizing-agent before exposure, facilitate reversal. It was Abney's opinion that reversal could be produced only when there was atmospheric oxidation. The addition of thiocarbamide to a well-restrained developer will help to produce reversal, especially if hydroquinone or eikonogen is used. The phenomenon of reversal is interesting; but owing to the uncertainty and lack of uniformity in manipulation, it will never be more than a photographic experiment.

## Eliminating Hypo

It has been said that the best hypo-eliminator is plain water; and it has this advantage over all other chemicals put forward for the same purpose, namely, that one may be quite sure that it does not leave behind it any by-products which might be as harmful as the hypo itself would be. But for certain purposes it is important to be quite sure that the last traces of hypo are actually destroyed. In mercurial intensification, for example, a very slight quantity of hypo left in the film would give rise to staining. An excellent guaranty against this is to make use of the well-known reaction between hypo and potassium permanganate. After most of the washing is done, a very dilute solution of permanganate may be used instead of plain water. It is almost costless, so little of this cheap chemical is required. A single small crystal will answer for a gallon or more of water; as all that is necessary is to give it a pink coloration, which must not be too deep, or there is a risk of staining the negative. A few changes with this solution will wash out most of the hypo and decompose any that might be left. If a very dilute solution is used, just strong enough for the color to be seen, we may be quite sure that there is no hypo left if after having the negative lying in it for a couple of minutes the color still remains visible. A very slight trace of hypo would discharge it or change it to a yellow brown, which at that degree of dilution would seem virtually white.—*Photography*.





# BEGINNERS' COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism on request.**

5. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* **Be sure to state on the back of every print exactly for what contest it is intended.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with *double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-beneer*. Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed January 31, 1917

*First Prize:* H. B. Rudolph.

*Second Prize:* M. C. Still.

*Third Prize:* James Allan.

*Honorable Mention:* Frederick C. Buchholtz, J. R. Goetz, Irving S. Lovegrove, Charles D. Meservey, P. D. Miller, C. L. Snyder.

Special commendation is due the following workers for meritorious prints: Halvor A. Caum, Foster Lardner, Theodore McClintock, Geo. P. Russell.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.



## A Tribute from a Contributor

THE renewals for subscriptions have come in very abundantly, particularly as PHOTO-ERA has been trying to maintain its well-known artistic standard, despite the greatly increased cost of production. Among the many letters that we are constantly receiving is one from a regular contributor, who writes:

"Let me tell you I enjoy the high standard you maintain in editing PHOTO-ERA — likewise the artistic form in which the material is presented — and for these reasons am pleased to be associated with it.

WILLIAM S. DAVIS."

## Doing the Rest

THE amateur who is content to be merely a "button-presser" loses more than half the pleasure of photography. In the early days of amateur-photography, when a darkroom was almost a necessity — a darkened room a positive necessity — to the finishing of photographs, the beginner was justified in turning over his exposed film to a professional, who had the conveniences for doing the work. But in these days of simplified processes he loses much pleasure and valuable experience by giving over this most interesting part of the work to another. Doing one's own work is most educational.

As for expense — the money put into the necessary equipment would soon be saved on the fees previously paid the finisher. Of course, there are many conveniences that can be purchased, and as one gains experience and confidence these may be added, but the absolute necessities are few. First, is the Kodak Film-Tank of a size to take the film used. This consists of a winding-box in which the film is wound on the spool with a dark, celluloid apron, which protects it from the light. It may then be removed in daylight and placed in the solution-cup which contains the developer. This is covered tightly and the film allowed twenty minutes to develop in the solution of given strength and temperature. When the time is up the developer is poured off, the cup filled two or three times with water, to rinse off the developer, and then filled with the fixing-solution. When this has acted for the required length of time, the film is ready to remove from the spool and receive an hour's washing in running water or ten-minute baths in a tray of fresh water. As the films are coated on both sides they must be suspended by the corner from a shelf, where they may dry free of contact with anything.

Complete instructions come with the tank, and there is also a little book which in paper cover may be had for a quarter, "How To Make Good Pictures." It deals with most amateur-problems in a very efficient manner. The negatives obtained are the foundation for all subsequent processes, and too much care cannot be taken to see that they are kept free of scratches, finger-marks, etc., as the film is very easily damaged when wet. This is a matter of great importance.

The making of the prints is a less mechanical process, and one that requires a little experience to bring perfect results. It is well worth the expenditure of time and a little wasted material to master it, as the developing of a print is one of the most interesting processes in the whole photographic category. This part of the work should be carried on in the evening whenever possible, as the paper will not stand much light. A table covered with a piece of white oil-cloth is most convenient, and a shaded light that does not strike the table directly. Any light may be used for printing, but there should be some way of marking the distance of the printing-frame from the light, so that uniform results may be obtained. It is advisable to have the printing-frame a size or two larger than the films used, so that if one wishes at any time to use a mat and larger paper it can be done. This is true also of the trays used, and especially of the fixing-tray. There should be three trays — white enamel ones are very satisfactory — and they should be marked in some way so that they may always be used for the same solutions. The tray at the left should contain the developer, the center tray clear water, or an acid short-stop, and the third the fixing-bath. The ready-prepared solutions can be purchased, are safer and surer than those prepared at home, and in the quantities used by the amateur there would be little difference in expense, and greater satisfaction.

The first difficulty encountered will be probably the choice of paper. One cannot select one grade and expect it to give good results from all negatives. Azo is an inexpensive paper to use and gives excellent results. It comes in three grades, the names of which are rather misleading, the softest grade being marked "Hard," the next harder is called "Hard Medium" and the one giving greatest contrast is "Hard X." The Medium will be found to suit the average negative best, but if on trial this proves to give a print too white in the light parts and too dark in the shadows, try a print on the Hard. If, on the other hand, the Medium gives too gray a print, without contrast, try the Hard X, which will give a fair print from negatives that show hardly any image. However, avoid the use of hard paper whenever possible as harsh contrasts often spoil a picture.

With an incandescent-electric globe of 16-candle power, a negative of average density should give a print in ten or fifteen seconds at a distance of one foot. Paper will be saved by taking a sheet and cutting into small test-strips. Try one of them at fifteen seconds; if over-printed, it will come up very quickly in the developer and soon be very dark. If under-printed, it will come up slowly, and, after prolonged development, will still be pale. When rightly timed it should develop to the right shade in about two minutes, and, unless over-printed, further development will make very little change. If fifteen seconds proves too short a time, do not add one or two seconds — double it — or if too long, cut it in half. You will soon find the right time by this method, and then, if the frame is kept a definite distance from the light, all subsequent prints should be right. Prints should be rinsed quickly when development is complete, and then immersed at once and completely in the fixing-bath. A stick or rod of some sort should be kept in the fixing-tray to keep the prints in motion for a few seconds when first put in. After that, they may be left quiet for fifteen or twenty minutes, when those first put in should be taken out and washed for an hour in running water. Care must be taken that none of the fixing-bath be carried into the developer on fingers or otherwise. A very little experience and a capacity to take pains will soon make a good workman, and the pleasure obtained from the work will more than repay the effort.

KATHERINE BINGHAM.

## A Quick Method To Find the Size of Image

If an object is one foot in diameter, how large will it appear in the finished picture? That is a rather indefinite question, but I will take it as a base from which to work. The answer I will put in the form of a fraction of an inch.

If the camera has a 4-inch focus lens, I take 4 for the numerator, and if I estimate that the distance of the object from the camera is 25 feet, I take 25 for the denominator, which gives me a fraction of  $\frac{4}{25}$  of an inch — the size that the object will be in the picture. If the camera has an 8-inch focus lens, then I take 8 for numerator and, if the distance is 8 feet, I take 8 for the denominator. This gives  $\frac{8}{8}$  of an inch, or one inch. Again, if the camera has a 10-inch focus lens, I take 10 for numerator and, if the distance of the object is 150 feet, I take 150 for denominator, which gives  $\frac{10}{150}$  of an inch.

This gives me, by what I consider a minimum amount of figuring, the size of image produced by an object one foot in diameter. In most cases, it is easy to judge the size of the image produced by larger or smaller objects in the picture. — WILLIAM H. BLACAR.





"AH, THERE! "

H. B. RUDOLPH

FIRST PRIZE — BEGINNERS' CONTEST





## Spotting Glossy Bromide Paper

It is usually considered a difficult task to spot glossy surfaced papers with any degree of success, and for any negative which when printed will require considerable spotting, one of the matte-surface papers is recommended for use. By the following method, however, it is possible to spot a glossy paper having a black and white image, and make a fairly good job of it: A small instrument, such as a pen-nib print-trimmer, having a small, sharp and pointed cutting edge, is required. This must be as sharp as it is possible to get it. It is used to roughen very slightly the surface of the paper on the particular spot where the blemish is which it is

and the hood may be prolonged for, say, an inch behind the finder. This cuts off a great deal of extraneous light, so much so, in fact, that the image can be seen more clearly than in any other way.—*Photography*.

## Cleaning a Lens

It is a most important thing in photography to have a perfectly dust-free lens. Any particles of dust on the surface mean that the rays of light passing through the lens are interfered with. Many an amateur, who reads the injunction to keep his lens perfectly clean, attempts to do so without due care, and scratches the highly polished surface. To prevent this, the following rules



WINTER-BROOK

M. C. STILL

SECOND PRIZE — BEGINNERS' CONTEST

desired to remove. A very gentle touch should be used, just enough to give the paper a barely perceptible tooth, and the white spot is then toned down to match the surrounding tint by means of a soft lead-pencil. Black spots can be treated in this manner just as easily as white ones, and if too much is scraped off then it can be remedied by a touch of the pencil. With a little care, however, it is quite possible to reduce this without the use of the pencil.—*Amateur Photographer*.

## A High Viewpoint

It is a common complaint against hand-camera-work that, in so many cases, the viewpoint is too low—the lens seeing the subject from about waist level. Hence, all sorts of trouble—patches of sky coming down into the picture, heads coinciding with the skyline, and so on. Many hand-cameras cannot be used at eye level without some alteration, owing to the position of the finder; but it is possible generally to fix a little cap over the finder containing a scrap of looking-glass at an angle of 45°, so that, looking along the top of the camera, the view in the finder can be seen reflected in the mirror. The arrangement should be removable,

should be observed. Take a clean sheet of white drawing-paper, and lay it on the table. Take the lens carefully apart and dust each component on each side with a fine camel-hair brush. Now pour into a clean graduating-dish the following:

|                       |          |
|-----------------------|----------|
| Distilled water ..... | 2 ounces |
| Alcohol .....         | 1 ounce  |
| Nitric acid .....     | 3 drops  |

Mix this solution well, and dip a tuft of filtering-cotton in it. Rub this on both sides of the lens. Dry with a piece of soft linen, and then wash over the sides with a tuft of the filtering-cotton dipped in a solution of caustic potash. Now polish with a clean and very soft chamois cloth, kept only for this purpose. (When this cloth is not in use, keep in a clean paper or cloth-bag.) After polishing, dust once more with the camel-hair brush, and carefully replace. This is far more satisfactory than the usual wiping with a silk handkerchief.—*The Amateur Photographer*.

*Camerist*—"It's hard to keep from kissing you."

*The Fair Subject*—"You must be careful not to over-exert yourself."



## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**A. D. E.—**Sometimes an enamel-tray will cause trouble, when it has gotten chipped or has the enamel worn off in spots. The exposed iron coming in contact with the developing-solutions may stain or otherwise injure the prints or negatives. Such trays should be recoated with bath-tub enamel, the broken places first being filled with litharge mixed to a paste with glycerine and plaster of Paris.

Without knowing the origin of this purple color in the window-panes, many persons introduced such windows in their homes about 1876, and this old violet glass became somewhat of a vogue. It must be remembered that there is a difference in cause and sentiment regarding this old violet glass as now seen in some of these old private residences.

**E. S.—**Transparencies are not difficult to make if one is at all accustomed to photographic processes. They are simply prints on glass, and made after the same manner. It is best to use a rather slow plate, as it is easier to manipulate and gives good contrast. Place your negative and plate film to film, in a printing-frame, and expose to artificial light, at a distance of three or four feet, for a few seconds (with 16 C. P. electric light, and an average negative, possibly five to ten seconds), then develop in a good contrast developer such as is given with the plate chosen. Special transparency plates are on the market, coated on ground-glass. If these are used, all that is necessary



ALONG THE LAKE SHORE

JAMES ALLAN

THIRD PRIZE — BEGINNERS' CONTEST

**F. A. C.—**With regard to the violet panes which correspondents have noticed in some of the old residences of Boston and other Eastern cities, I will give the explanation of Mr. Ralph Cram, the eminent Boston architect:

"In the year 1800, or at all events when this particular group of houses was being built, a ship-load of glass came over from England, which was perfectly clear when it arrived, but, shortly after it was set in the windows, some chemical action took place which turned the glass purple. It is supposed that some chemical or other became mixed with the materials when the glass was manufactured, and that under the influence of the sun the glass slowly changed its color."

to show them is a plain glass over the face for protection when put in the binding-frame. If the plate is clear glass it should be bound with a ground-glass.

**H. B.—**An easy way to title negatives or place any inscription on a print which can be shown in white letters, is this: Take a piece of Kodaloid, which is a very thin transparent celluloid, and holding it with the plate toward the light, locate the place where you wish the writing to appear. Then take the Kodaloid, and on the side which will come next the plate do your printing or writing. When the two are fastened together at the edges, you have a good protection for your negative, and the title will print correctly. A good medium is ink with lamp-black dusted in.





## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

F. Z.—In your picture, "Check," representing a human skull on a chess-board, you have a very effective theme. For a reason that is not apparent, you have put the skull entirely out of focus, also the pawns, except two or three, which are nearest the camera. The corner of the table-cloth nearest the camera is out of focus and out of drawing. Only parts of the entire picture are in focus, which detracts from the artistic and technical quality of the picture. Also, the light shines very strongly on the corner of the table-cloth nearer the camera, and the scattered light on the pawns and the skull prevents the picture from possessing the element of unity so essential in a satisfactory composition.

A. F.—The picture of the boy, leaning over the stone-wall of a pond and holding in his hand the stem of a leaf, is not convincing as a pictorial theme. The subject is evidently posing and engaged in no pronounced activity. The picture is also badly focused, and the receding and curving line of the edge of the basin is indistinct, but brightly lighted, hence very disturbing in the arrangement of the picture. It detracts very materially from the figure of the boy, the major part of whom only is included in the picture-space. A subject of this kind requires more space, either on a larger plate or a greater distance from the camera.

F. C. O.—The picture of the young woman, engaged in writing a letter and facing the camera, consists of masses of white, which are paper, stationery and book lying on the table in front of the model; the latter's white costume and the bright light on her hands and arms and face also detract. The idea for a picture is excellent, but the manner of carrying it out is far from artistic. The fault lies chiefly in the white costume of the model and the white objects on the table. The illumination seems to be too strong. This exceedingly difficult subject requires considerable experience to transform into a successful and satisfying picture.

W. B. B.—Your "portrait" of a baby has several faults. First of all, the baby's face is too dark, almost black. It is a *white* baby, and not *colored*. One might easily arrive at the latter opinion, judging by your picture. The fault seems to be *underexposure*. Had it been better timed, the face would be light and there would be also more gradation and character in the drapery. The background is all right, except for the white streak, which easily could have been eliminated by local reduction in the original film-negative. The dark pillow is also a little somewhat out of place, as it does not harmonize with the white costume of the child.

F. D. M.—Your at-home portrait is considerably underexposed, the dark costume being intensely black, and the hands and face in a very high key, with no correct color-value. This is the fault of such portrait work done indoors. It is done largely to avoid motion of sitter, and unless the light is very favorable, it may be well to consider the return to the much-abused, old-fashioned headrest, which, if used intelligently and carefully, is not a bad contrivance, after all.

J. I.—The composition in your at-home portrait is very faulty, also the lighting. Please remember that simplicity is one of the main things to be considered in portraiture. The background should not be too animated or complex, but take its proper subservient place in the composition. The lighting should be so managed as to yield a round and plastic effect of head and hands. Amateur lighting is generally very flat. Such white accessories as hair-ribbons on children are objectionable. White accessories in dress of adults, such as neckties, cuffs, collars, shirt-fronts, vests, embroidery—although not objectionable outside the domain of photography—become great sources of irritation in portraiture, and require much skill and experience to subdue. This is done better by lighting, rather than by after-treatment on the negative or print. White or brightly lighted objects form stumbling-blocks even to the professional photographer.

S. F. L.—The road-view submitted has every appearance of having been taken with a very short-focus lens. The perspective of the road is greatly exaggerated; that is to say, it grows narrow too abruptly. The effect can be minimized by trimming one inch from the foreground and right side. This removes the widest part of the road and also improves the spacing.

C. D. S.—Your technical quality is very good here but you have a most incongruous collection of objects. The grove of trees is attractive and well shown, but why the women in boudoir caps, seated on what appears to be a lounge. The piece of furniture and the costumes are entirely out of harmony with the background.

E. E. P.—Your snow-values are excellent, but the telephone-pole at the right is the most prominent thing in the picture. If a view-point about opposite this pole had been chosen the next pole would have cut against the group of trees and been inconspicuous. As it is you sacrifice very little by trimming off.

S. W. S.—A well-lighted and posed head, but the background of dotted muslin is entirely too distracting and prominent. This same pose with a quiet background would have been 100 percent better.

M. A. P.—A fine mountain-view greatly marred by the auto so prominently placed in the foreground. It is impossible for the eye to get over that large dark mass to look at the view beyond. If it was necessary to include the car, it should have been farther away, and in a position to cut against the dark foliage instead of the light foreground. Attention to details is important.

F. C. J.—The picture of the child running along the street is very successful. The action is well caught and the expression is very childlike and natural. The one fault is the spacing. The little fellow is about to vanish from the scene. There is not enough space in front of the moving-figure. If the ample space at the back had been in front, the effect would have been much better.

M. C.—If the scratches to which you refer are on the emulsion side, and are entirely through the emulsion, dissolve a little gelatine in hot water, to which a drop or two of carbolic acid has been added, and coat over the scratch. When this is dry, you have a coating of gelatine which will allow you to work up the proper density with the retouching-varnish and pencil. If the scratches are on the glass-side, mix flour of emery to a thick paste in alcohol and rub on the scratch with a flannel-cloth.

J. I. C.—The ornate wicker chair is the most emphatic thing in your "Outdoor Portrait." The vignette on this subject is also inappropriate. The body of the chair gives the impression of floating in mid-air. The white vignette is only properly used with a white background, as with dark grounds the line is harsh and unpleasant, unless remarkably well manipulated.



# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

|   |                       |                |                |               |               |                 |                |                |               |               |                              |                |                |               |               |                      |                |                |               |               |
|---|-----------------------|----------------|----------------|---------------|---------------|-----------------|----------------|----------------|---------------|---------------|------------------------------|----------------|----------------|---------------|---------------|----------------------|----------------|----------------|---------------|---------------|
| *These figures must be increased up to five times if the light is inclined to be yellow or red. | MONTH AND WEATHER     |                |                |               |               |                 |                |                |               |               |                              |                |                |               |               |                      |                |                |               |               |
| †Latitude 60° N. multiply by 3;<br>55° × 2; 52° × 2; 30° × $\frac{3}{4}$ .                      | JAN.,<br>NOV., DEC. † |                |                |               |               | FEB., OCT.<br>‡ |                |                |               |               | MAR., APR.,<br>AUG., SEPT. ¶ |                |                |               |               | MAY, JUNE,<br>JULY § |                |                |               |               |
| ‡Latitude 60° N. multiply by 2;<br>55° × 2; 52° × 1½; 30° × $\frac{3}{4}$ .                     | Bright Sun            | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun      | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun                   | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun           | Hazy Sun       | Diffused Light | Dull          | Very Dull     |
| §Latitude 60° N. multiply by 1½;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .                     | HOUR                  |                |                |               |               |                 |                |                |               |               |                              |                |                |               |               |                      |                |                |               |               |
| ¶Latitude 60° N. multiply by 1½;<br>55° × 1; 52° × 1; 30° × $\frac{1}{2}$ .                     |                       |                |                |               |               |                 |                |                |               |               |                              |                |                |               |               |                      |                |                |               |               |
| 11 A.M. to 1 P.M.   | $\frac{1}{32}$        | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{32}$  | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{50}$               | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$ |
| 10-11 A.M. and 1-2 P.M.   | $\frac{1}{25}$        | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{25}$  | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$ |
| 9-10 A.M. and 2-3 P.M.  | $\frac{1}{12}$        | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | 1*            | $\frac{1}{16}$  | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | 1*            | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{50}$       | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ |
| 8-9 A.M. and 3-4 P.M.   |                       |                |                |               |               | $\frac{1}{5}$   | $\frac{1}{2}$  | 1*             | $\frac{1}{2}$ | 3*            | $\frac{1}{30}$               | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{30}$       | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ |
| 7-8 A.M. and 4-5 P.M.   |                       |                |                |               |               |                 |                |                |               |               | $\frac{1}{20}$               | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{2}$ | $\frac{3}{4}$ | $\frac{1}{20}$       | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$ | $\frac{2}{3}$ |
| 6-7 A.M. and 5-6 P.M.   |                       |                |                |               |               |                 |                |                |               |               | $\frac{1}{15}$               | $\frac{1}{8}$  | $\frac{1}{2}$  | $\frac{3}{4}$ | 1*            | $\frac{1}{15}$       | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{3}{4}$ |
| 5-6 A.M. and 6-7 P.M.   |                       |                |                |               |               |                 |                |                |               |               |                              |                |                |               |               | $\frac{1}{10}$       | $\frac{1}{5}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | 1½*           |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits in a well-lighted room, light surroundings.**

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.

# For Perpetual Reference

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

|           |       |       |
|-----------|-------|-------|
| U. S. 1   | F/4   | × 1/4 |
| U. S. 2   | F/5.6 | × 1/2 |
| U. S. 2.4 | F/6.3 | × 5/8 |
| U. S. 3   | F/7   | × 3/4 |
| U. S. 8   | F/11  | × 2   |
| U. S. 16  | F/16  | × 4   |
| U. S. 32  | F/22  | × 8   |
| U. S. 64  | F/32  | × 16  |

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16 × 4 = 1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16 × 1/2 = 1/32. Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

|  |   |  |
|--|---|--|
| Class 1/3, P. E. 156, Wy. 350, Wa.<br>Ilford Monarch<br>Lumière Sigma<br>Marion Record<br>Seed Graflex<br>Wellington Extreme   | Imperial Ortho. Special Sensitive<br>Kodak N. C. Film<br>Kodoid<br>Lumière Film and Blue Label<br>Marion P. S.<br>Premo Film-Pack<br>Seed Gilt Edge 27<br>Standard Imperial Portrait<br>Standard Polychrome<br>Stanley Regular<br>Vulcan Film<br>Wellington Anti-Screen<br>Wellington Film<br>Wellington Speedy<br>Wellington Iso. Speedy<br>W. & W. Panchromatic                       | Lumière Ortho. A<br>Lumière Ortho. B   |
| Class 1/2, P. E. 123, Wy. 250, Wa.<br>Ansco Speedex Film<br>Barnet Super-Speed Ortho.<br>Central Special<br>Cramer Crown<br>Eastman Speed-Film<br>Hammer Special Ex. Fast<br>Imperial Flashlight<br>Imperial Special Sensitive<br>Seed Gilt Edge 30<br>Wellington 'Xtra Speedy | Class 1 1/4, P. E. 90, Wy. 180, Wa.<br>Cramer Banner X<br>Cramer Isonon<br>Cramer Spectrum<br>Defender Ortho.<br>Defender Ortho., N.-H.<br>Eastman Extra Rapid<br>Hammer Extra Fast Ortho.<br>Hammer Non-Halation<br>Hammer Non-Halation Ortho.<br>Seed 26x<br>Seed C. Ortho.<br>Seed L. Ortho.<br>Seed Non-Halation<br>Seed Non-Halation Ortho.<br>Standard Extra<br>Standard Orthonon | Class 2, P. E. 78, Wy. 120, Wa.<br>Cramer Medium Iso.<br>Ilford Rapid Chromatic<br>Ilford Special Rapid<br>Imperial Special Rapid<br>Lumière Panchro. C      |
| Class 3/4, P. E. 120, Wy. 200, Wa.<br>Barnet Red Seal<br>Cramer Instantaneous Iso.<br>Defender Vulcan<br>Ensign Film<br>Hammer Extra Fast, B. L.<br>Ilford Zenith<br>Paget Extra Special Rapid<br>Paget Ortho. Extra Special Rapid   | Class 3, P. E. 64, Wy. 90, Wa.<br>Barnet Medium<br>Barnet Ortho. Medium<br>Cramer Trichromatic<br>Hammer Fast<br>Ilford Chromatic<br>Ilford Empress<br>Seed 23<br>Stanley Commercial<br>Wellington Landscape  | Class 5, P. E. 56, Wy. 60, Wa.<br>Cramer Commercial<br>Hammer Slow<br>Hammer Slow Ortho.<br>Wellington Ortho. Process<br>W. & W. Process Panchromatic        |
| Class 1, P. E. 111, Wy. 180, Wa.<br>American<br>Ansco Film, N. C.<br>Atlas Roll-Film<br>Barnet Extra Rapid<br>Barnet Ortho. Extra Rapid<br>Central Comet<br>Imperial Non-Filter  | Class 1 1/2, P. E. 84, Wy. 160, Wa.<br>Cramer Anchor  | Class 8, P. E. 39, Wy. 30, Wa.<br>Cramer Contrast<br>Cramer Slow Iso.<br>Cramer Slow Iso. Non-Halation<br>Ilford Halftone<br>Ilford Ordinary<br>Seed Process |
|  |   | Class 100, P. E. 11, Wy. 3, Wa.<br>Lumière Autochrome  |





## OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE front-cover decoration this month demonstrates anew the skill of a versatile and successful worker, H. B. Rudolph, who, having won first prize in the so-called "Beginners' Competition," and several others previously, will hereafter be found as a participant in the advanced workers' class. This is according to PHOTO-ERA custom; and after a worker has captured three first prizes in that department, he will be excused from further activity as a pictorial competitor in PHOTO-ERA; at least, he will be tendered a rest for a year or two, and re-admitted at the discretion of the Publisher.

As to Mr. Rudolph's picture — which, as the most successful entry in this month's secondary competitive class, appears also on page 196 — it wins our affections by reason of the simple charm which a scene of child-life, such as this, never fails to exert. The fond parent, if an amateur photographer, is apt to be more than usually observant, and he will discover virtually endless opportunities in the home, more than in a professional studio, to record those delightful and spontaneous little ways that mark the initial stage of man. Unfortunately, few of baby's irresistible caprices are capable of strictly artistic interpretation, but if the camerist of the family be on the alert, or if baby will "perform" in accord with the necessary preparations, good results may be expected. In any event, Mr. Rudolph made the exposure at the psychological moment, and produced a picture of striking merit. In addition to the alluring attitude of the little "sitter," the technical features — modeling, illumination and values — are brilliantly successful. Data: February, 10 A.M.; bright light from two large windows; 5 x 7 Century camera; 7-inch Euryplan lens, at F/4.8;  $\frac{1}{2}$  second; 5 x 7 Eastman Portrait-Film; hydro-metol, tray; enlarged print on Montauk Bromide No. 7.

The present supreme quality of Mrs. Cassidy's work is suggestion. For some time a technician of brilliant ability, this worker has of late given greater prominence to the subjective side of her camera-creations. This property was noticeable in her "Killarney Roses," which embellished the front cover of the June, 1916, issue, but is present in a greater degree in "Silent Homage," the frontpiece of this issue. The spiritual significance of this picture — dedicated to the approaching Easter season — of a new life and the Resurrection, are presented here with dignity and devotion. As a composition, the picture is conspicuous for simplicity, grace and spontaneity of design. It certainly merits study and emulation. Data: May, 11 A.M.; 5 x 7 Graflex; 8 $\frac{1}{2}$ -inch Goerz Dagor, at full aperture; 5 x 7 Standard Orthobon; enlarged on 8 x 10 Eastman Rough Bromide, with R. & S. Semi-Achromatic Doublet.

Among the most interesting genre-pictures shown at the annual competitive exhibition of the Boston Y. M. C. U. Camera Club, last December (see reference to this event in our January issue), was one of a fish-monger, by Chester Grillo, reproduced on page 163. The scene portrays action — no unkind suggestion — and excellent, orderly composition, without much evidence of preparation. Data: October, 4 P.M.; bright sunlight; 3 $\frac{1}{4}$  x 4 $\frac{1}{4}$  Auto Graflex, with 5-inch B. & L. Ic Tessar; stop, F/4.5; Hammer Non-Hal plate; pyro-acetone;  $\frac{2}{5}$  second; enlarged on Wellington Cream Crayon Rough.

In "The Top of the Hill," page 165, one notes a narrow, interesting footpath coursing its irregular way down the hill, accompanied by a barbed-wire fence, and an old wooden fence and stone wall, all lines converging towards the vanishing-point. With the old apple-tree, at the right, we have a commonplace subject, but one filled with true pictorial interest. Data: May, 11 A.M.; 8 x 10 view-camera; 13-inch F/8 symmetrical lens, at F/16; graded color-screen; sunlight and clouds (threatening); 2 seconds; plate; Duratol; 5 x 7 contact print on P. M. C. Bromide.

"Scarborough Bridge," page 166, is one of the many picturesque bits in "Franklin Park," the public recreation-ground *par excellence* of Greater Boston. The original print of this popular subject was hung in the Y. M. C. U. Camera Club exhibit already referred to, but failed of official recognition. The general effect of this picture is so pleasing that one fails to notice at once that the arch of the bridge occupies the center of the picture-area, and that, possibly, the artistic result would be improved by the removal of one inch of space from top or bottom. Data: October, 4 P.M.; 5 x 7 Hammer Ortho Double-Coated; P. & S. Semi-Achromatic, 12-inch focus, at stop F/6;  $\frac{1}{2}$  second.

Well-lighted and well-modeled, the little girl, posing as "Our Cherub," page 172, wins our admiration. Innocently gazing into the goldfish-bowl, she demonstrates the truth that the well-formed body of a child, if posed artistically and retaining the correct flesh-values, is a worthy subject for the camera. Data: Professional studio, 14 $\frac{1}{2}$ -inch Heliar, at F/6.8; April, 1916, P.M.; cloudy day; 1 $\frac{1}{4}$  seconds; Cramer Banner; pyro; print on Artura C.

Scenes differing very little from the one shown on page 173 used to be seen in the villages of Picardy, where now only ruin and desolation prevail. In gazing on this modest little tailpiece, let us ponder long, oh, so long, before we participate lightly or flippantly in the jingo-talk, the topic of the hour. Data: October, 4 P.M.; good light; 3A Graflex; Zeiss lens, at F/6.3; 3-tine color-filter;  $\frac{1}{15}$  second; Eastman Non-Curling film; enlarged on Soft Cyko.

The view of San Antonio River, Texas, page 175, is typical of that locality, which is said to be rich in pictorial possibilities. Mr. Hall's picture suggests this picturesque quality and, after a little judicious trimming, cannot fail to claim artistic consideration. Data: November, 1916, at 4 P.M.; Icarette camera, 2 $\frac{1}{4}$  x 2 $\frac{1}{4}$ ; Heckla Anastigmat, at F/8;  $\frac{1}{50}$  second; Brownie film; Eastman Universal developer; part of negative enlarged on Artura Carbon Black.

In his article on night-photography, Mr. Sutter has shown convincingly how artistic compositions may be obtained. Note his series of exceedingly attractive illustrations, pages 176 to 179, displaying admirable gradations and transparent shadows. Data: "Turning Night into Day" — February 10, 8.20 P.M.; Voigtlander Collinear, III, at F/6.8; Seed Graflex plate; 4 minutes. "The Quiet Street" — February 10, 8.30 P.M.; 5 minutes; rest as preceding. "Christmas Eve" — December 25, 7.15; there was no daylight, and it was drizzling; Darlot R. R. lens, at U. S. 8; 7 minutes; Seed 30. "Eight Inches by Morning" — 7.10 A.M.; 5 minutes; rest as preceding. "Dinner-Party" — Voigt-

länder Heliar, at F/6.8; Seed Graflex plate; March 5, 8.45 p.m.; 3 minutes; at F/8. "The Apartment House" (page 176)—January 22, 7.50 p.m.; Collinear, at F/6.8; 8 minutes; Standard Orthoanon.

A much-admired portrait in the P. A. of A. Salon of last year was J. D. Strickler's "Mrs. G." Lighted conventionally, to be sure, the portrait possesses an unusual degree of soundness or plastic effect. The poise of the head, the management of the drapery and the artistic proportions merit unstinted praise. All bears the impress of a worker experienced and at home in his chosen field. Data: Made in professional studio; 8 x 10 Verito lens; Hammer Red Label plate; pyro, tank.

### Advanced Workers' Competition

The "Spirit of Christmas" brought out many efforts along purely conventional lines. That was to be expected. Nevertheless, this theme will always be associated with the Christmas-tree, do what you will. In several instances, however, the worker left the beaten track and entered the realm of suggestion, permitting the beholder to engage in flights of fancy. Whenever the theme can be pictured convincingly in this fashion, it should be done; yet the objective, the obvious, is still the preferred method of portrayal.

All that can be consistently included in the pictorial design, without crowding, has been attempted by R. J. Morrow, page 189. Here the idea has been expressed with the aid of maternal love and affection, and the traditional accessories of the glad season. With artistic judgment, the tree has been placed in the background, and the interest centers in the group—mother and child—in the foreground, in front of the fireplace. The little one is being told the story of the Christ-child, or the coming of Santa Claus. The entire scene is suggestive of the theme intended to be pictured, and the means of expression has not been made too obvious. Data: January 3, 1917, evening; 1,000 half-watt\* blue globe lamp and 45-degree reflector, light diffused and 10 to 15 feet from subject; T. & P. half-plate; 9-inch Verito, at F/8; Wellington & Ward Extra Special Sensitive; M. Q.;  $1\frac{1}{2}$  to  $2\frac{1}{2}$  seconds; enlarged on Azo B; Amidol. [\*This means 2 c. p. to every watt of power.—Ed.]

The totally imaginative way to treat the subject, as has been mentioned above, has been pictured by Bertran F. Hawley, page 191. Naturally, the designation gives the clue to the meaning of the picture. A material title, such as "Lost in the Snow," or "Admiring the Snow," would have caused the picture to be rejected; but now the beholder's interest is aroused and, together with the wayfarer, is busy with the thought of giving and making some loved ones happy. Pictorially, too, Mr. Hawley's effort is praiseworthy. The tones of light and shadow are extremely beautiful and disposed with artistic skill. Although made in mid-winter, and amid brilliant sunlight, there is not one harsh note in the entire composition. The figure is placed with excellent judgment, and the values throughout are admirable in their fidelity. Data: Late December, 1916, noon; bright sunshine; B. & L. 6 $\frac{1}{2}$ -inch; F/6.3 anastigmat, used at full opening; 4 x 5 Wellington Extra Speedy plate; pyro-acetone;  $\frac{1}{25}$  second; enlarged on Wellington Smooth Bromide; slight diffusion by separation of front glasses in a Cooke F. 5.6 lens.

A pleasing version of the subject is by Anson M. Titus, page 192. With an eye to correct composition, the artist has placed the Christmas child well towards one end of the picture-space, and appropriate gifts, well arranged, toward the other. The lighting of the entire scene is well diffused, creating no undue contrasts. Data: F. P. Kodak, No. 3; B. & L. Zeiss Tessar, series

11B, 5 $\frac{1}{4}$ -inch focus; stop, F/6.3; bright sun outside;  $\frac{1}{2}$  second; Wellington Extreme; pyro, tank; enlarged Cyko print.

### Beginners' Competition

"Ah, there!" the first-prize picture in this competition, has been referred to at length at the beginning of this department. M. C. Still has been a faithful participant in these competitions, and has now emerged with a second prize to his credit. His picture, "Winter-Brook," page 197, is a well-ordered, though not altogether original composition; yet it is not commonplace. By reason of the wooded background, the little stream with its snow-covered banks comes into prominence, and, owing to the well-modulated lights and shadows on the snow and water, there are no violent contrasts. This presence of excellent technique contributes very materially to the artistic success of the task, and Mr. Still is to be congratulated. Data: 5 x 7 Premo; 7 $\frac{1}{2}$ -inch Cooke, series 3a; 2 p.m.;  $\frac{1}{2}$  second; 5 x 7 Eastman Portrait-Film; pyro, tray; B. & J. 3-time ray-filter; good light; 5 x 7 Normal Cyko Studio print; 6 seconds by Welsbach light; hydro-duital developer, made up according to Ansco M. H. formula.

Although of almost equally divided interest, James Allan's "Along the Lake-Shore," page 198, commands attention because of its pictorial beauty. Had he either lowered or raised his camera, just before he made the exposure, he could have obtained a seascape with sky and sea of very unequal proportions, hence more consistent artistically. He can produce the same effect by trimming the resultant print, or, what, in a large number of prints, would be economical, use narrower sheets of paper. But trimming a print, as an afterthought, is not exactly equivalent to composing the picture. Data: October 5, 1915, 8:30 a.m.; bright light; 4 x 5 Reflex; 7-inch Goerz Celor; stop, U. S. 8; Ideal ray-filter;  $\frac{1}{5}$  second; Imperial S. S. Ortho Backed; Duratol; 6 $\frac{1}{2}$  x 8 $\frac{1}{2}$  enlargement on Wellington Carbon Bromide.

### The Tone of the Background

For a long time I could not understand how some of the home-portrait workers obtained the fine backgrounds that appeared so naturally subdued in their pictures. When I tried to do this kind of work, my backgrounds came out very light, with the figures in the wallpaper and other details very strong and obtrusive. Just by accident I discovered that it was all a matter of either cutting off the light that illuminated whatever was behind the sitter, or, if that was not possible, selecting such a position for the subject that the room behind was not too brilliantly lighted. If one wishes an extreme example of what can be achieved in this direction, let him pose his subject just outside an open door leading into a wood-shed, or some such unpromising scene, that is dimly lighted. Despite the fact that the eye can see a jumble of undesirable material for a portrait background, the picture will come out with a fine black background having excellent atmospheric effect. Seat the subject back in the room, open all the wood-shed windows and admit a flood of light, and all the objectionable surroundings will be painfully in evidence.—A. S. D., in *Camera-Craft*.

### At the Camera Club

"My husband is very devoted; he anticipates my every wish."

"So does my husband, mine; whenever he thinks I am going to ask him for money to buy an ounce of metal, he lights out."





# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Those Open Mouths

THE February editorial, "Open Mouths in Portraiture," seems to have raised a storm of protests among my critical readers, inasmuch as they regarded the charming picture of a young girl, on the front cover, as a direct contradiction of my statement regarding the open mouth in portraiture. Among those who have taken issue with me on this question is the erudite "Listener," of the *Boston Evening Transcript*:

"The ever-didactic editor of PHOTO-ERA inveighs against the open mouth in portraiture, or parted lips, especially common in portraits of young women. He will have it that it suggests 'mouth-breathers,' or adenoids, or catarrh — not bearing in mind the charming and famous portraits of Romney, Sargent and other masters of portraiture, with parted lips. As if to show that his strictures are not to be taken seriously, the very same number of this excellent, always painstaking and instructive Boston magazine has for its main pictorial feature, and ornamental cover, a picture of a pretty girl with open mouth, but evidently in the best of blooming good health!"

The point is well taken, and the list of artists who painted handsome women with the lips parted could be easily extended. But does this circumstance preclude the suggestion that eighteenth-century women were as subject to the same respiratory complaints and discomforts as those of the present day? It seems hardly necessary to point out that in certain cases the female upper lip is so short that to close the mouth would result in a strained and unnatural expression; but if the sitter has a plausible excuse to pose with lips parted, the artist should refrain from introducing any suggestion of mental weakness in the portrait. I wonder what Romney had in his mind when he painted the well-known portrait of buxom Lady Hamilton agape — in the costume of a country-lass and seated on a balcony. Moreover, what a portrait-painter can accomplish is not always within the power of the master-photographer. But if the Editor wished to escape from the imaginary though not altogether unpleasant dilemma, he could have set up the argument that "The Vision" was a genre rather than a portrait.

This brings us to the accepted definition of a genre — a figure or portrait used as the basis for pictorial treatment. This would remove the picture of the young girl in question from the realm of strict portraiture, for her expression of mingled wonder and surprise — although interpreted with fine artistic skill — does not seem to suggest a characteristic likeness. A somewhat unusual pictorial quality dominates the picture, and makes a stronger appeal to the lover of the beautiful than, possibly, a more reposeful and serious, though doubtless pleasing, aspect of an obviously interesting face.

## A Little Dictionary Is a Useful Thing

It was Pope who said, "A little learning is a dangerous thing;" yet a smattering of a foreign tongue has often proved a "life-saver." In any event, it is generally advisable for an editor, totally unfamiliar with modern languages, to verify foreign words or phrases with the aid of a dictionary before permitting the printer to proceed. Due allowance for slips!

In looking through a cotemporary photographic journal recently, I came to an article on posing. The illustrations were excellent; but the names of some of the artists were astounding, and made me laugh.

Steiglitz, instead of Stieglitz, was not so bad; but "Nachfolger" (successor) was funny, and "Genre," "Breveté" (patented) and "Verboten" (prohibited) capped the climax. The poor editor had copied what happened to be on the back of each photograph in the belief that it was the name of the photographer.

## Bird-Photographers, Be Merciful!

It is passing strange that some amateurs, themselves men of intelligence and common sense, will go to a lot of trouble to make pictures of song-birds — nestling, alighting and feeding the young — which results, generally abominably wretched from every possible viewpoint, they send to PHOTO-ERA, fully expecting that they will be accepted with alacrity, and promptly published at the Publisher's regular cash-rates.

I have had recently the unhappy experience of receiving, and promptly returning, several lots of the most awful-looking bird-pictures imaginable. In nearly every case the bird, the nest and the surrounding branches and twigs were photographed as a confused, inextricable mass, and so badly lighted and under-exposed that I wondered what on earth prompted these unhappy mortals to waste their time in such totally unsuccessful efforts, and, worst of all, to send them to a photographic journal perfectly confident that they would be published and paid for. And the accompanying stories! — written in inexcusably bad English, giving information of little or no practical value — were no better than the photographs.

I sincerely hope that camerists eager to engage in bird-photography will read these lines and then pause. The sport is an interesting one, but requires adequate preparation, executive skill, patience and perseverance.

## A Case for the Expert Repairer

A WELL-KNOWN photo-supply house, in Toledo, Ohio, received the following letter recently:

"We are sending you, by parcel-post, a shutter. We should say, an opener, as it does not shut. It is an Auto-Shutter, so called because it ought to shut. From the price we paid for it, it ought to be a regular Auto and not a Ford. We tried to have it fixed here, in St. Louis, but we understand 'we can do better in Toledo.' The local repairer held various post-mortems over this thing; but came to no other conclusion than that it did n't work.

"You will note it has two curtains. One goes up and one down — sometimes. Sometimes they pass each other without speaking, but as a rule they stop and shake hands. But more generally, they are probably afraid of each other, as, when they are within hailing distance, both stop, and no amount of curtain-speeches of the blankest kind can make them change their mind. Now we always thought a lot of this shutter and would rather use it than our other shutter, which scares the kids."



## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### Los Angeles Salon

THE Southern California Camera Club announces a salon, open to all pictorial photographers, to be held May 11 to 26 inclusive, 1917. A committee of three disinterested artists will pass upon the pictures to be hung. No prizes will be given; but such a high standard of pictorial excellence will be maintained that admission to the salon of selected pictures will constitute a distinction.

Although this is the first activity of large scope undertaken by the Southern California Camera Club—organized only a little more than a year ago—it is anticipated that this salon will represent the highest standard of pictorial ideals in photography. This club has already held an unusually successful local exhibition of local pictorial work, and this, with the fact that several of the club-members have exhibited work in all the well-known salons in the past, assures intending contributors that no detail will be ignored to place this exhibition among the notable photographic events of the year.

Although few ironclad rules have been adopted by the committee in charge, it is preferred that the largest dimension of mounts does not exceed thirty inches. However, prints will be debarred only because, in the opinion of the judges, they do not represent the highest standard of pictorial qualities. Prints must be in the hands of the print-committee before May 1. Application for entrance-blanks should be made to Miss O. P. Close, 313 West Third Street, Los Angeles, California.

### German Photo-Experts Lost to Science

SEVERAL issues of the Vienna monthly photographic journal, *Photographische Korrespondenz*, covering the period from August, 1915, to November, 1916, have reached the offices of the *British Journal of Photography*.

Among many items of interest were the obituary notices of a number of technical or scientific workers in photographic and photo-mechanical circles. The chief of these are as follows:

The death of Professor Karl Schwarzschild took place May, 1916. For several years he had been director of the Potsdam Astro-physical Observatory. In scientific photography his name is associated chiefly with his investigations of the Bunsen-Roscoe law, in which he showed that the time-intensity relation fails to apply to highly sensitive gelatino-bromide emulsions. The Schwarzschild formula, embodying his researches, has been applied in the measurement of the magnitude of stars and in sensitometric observations on dryplates. At the outbreak of the war he became an officer in the Landwehr, and saw active service on the western and eastern fronts, where he received the wounds which resulted in his death.

J. Gædicke, dean of photographic journalists in Germany, and for many years proprietor and editor of the *Photographisches Wochenblatt*, died in May, 1916. He was eighty-one at the time of his death. He was the author of text-books on flashlight-photography, platinum-printing and other subjects.

A commercial personality in German photographic circles has been removed by the death of Carl Hackl,

well known as the Berlin agent of the Belgian firm of Gevaert, and described in the obituary notice as director of a Gevaert business registered in Germany as a limited company. He was also head of a firm bearing his own name.

Jacob Husnik, of the well-known process-house of Husnik and Hänsler, Prague, died in February, 1916. He was the author of several text-books of photo-mechanical processes, in which branch of photography he was a pioneer. Collotype in particular was a process of which he may be said to have been the creator in commercial form.

Another well-known process-worker whose death is recorded is Carl Angerer, head of the Vienna firm of Angerer and Göschl. Angerer was a pioneer in reproduction-processes from about the year 1860, and the founder, 1873, of the firm by which his name was most widely known.

A Berlin expert in ferric copying-processes, Adolf Tellkamp, sustained wounds from a shell-explosion in the Belgian campaign in 1914 from which he died.

A writer who at one time contributed to British publications dealing with pictorial photography has died in the person of Ernst Juhl, of Hamburg, originally an electrical engineer, but in later life an assiduous collector of specimens of pictorial photography.

Other workers of photographic eminence are mentioned, and it is to be regretted that death should have caused the science of photography to lose so heavily.

### Vivian Akers' Photographs

WE have recently seen a large collection of enlarged photographs of landscapes by Vivian Akers, painter-photographer, of Norway, Me., which possess unusual merit because the themes have been selected and treated from a painter's viewpoint. Thus, these pictures present the element of originality and, in most cases, are strikingly effective in the management of light and shade, and the single objects such as trees and boulders. As Mr. Akers was a pupil of the late John J. Enneking, he has acquired that artist's method of pictorial composition, having, indeed, used the very landscape-subjects, and, unless he has marked talent as a painter, Mr. Akers is likely to become more quickly and quite favorably known as a photo-pictorialist, for his approximately four hundred prints are copyrighted and systematically marketed through an agent. By the way, this method of handling meritorious photo-prints should appeal to those pictorialists desirous to increase their revenue. We hope to acquaint our readers with the pictorial character of Mr. Akers' photographs in an early issue of our magazine.

### John A. Tennant Admitted to New York Bar

MANY of our readers will be glad to hear that the editor of *Photo-Miniature* has received the degree of Bachelor of Laws from the Fordham University, New York, and that he has been admitted recently to practise as an attorney and counselor-at-law of the Supreme Court of the State of New York. Mr. Tennant will continue to edit and publish *The Photo-Miniature* as formerly and with his accustomed success.



## Professional Photographers' Society of New York

THE thirteenth annual convention of this organization took place at Hotel McAlpin, New York City, February 26, 27 and 28. President E. L. Mix conducted the meetings, the chief features of which, in order, are as follows:

"Pop" Core initiated an "experience" meeting, in which Miss Stewart and McFarland, of Canandaigua; Loomis, of Elmira; Stone, of Hamilton; Loree, of Albany; McGeorge, of Buffalo; Smith, of Rochester, and Boice, of White Plains, participated.

Mamie Gerhard, one of the famous Gerhard Sisters, of St. Louis, talked on salesmanship, interestingly and instructively, and won enthusiastic approval. A continuation of E. B. Core's talks on experiences brought out good points from Zachariah, from far-off New Zealand; Crawford and Cunningham, of Hamilton; Miss Surdame, of Toronto; Mr. Buxbaum, of New York, and Mr. Abel, of Cleveland. A very fine exhibit of "Doré-types," by Mr. Buxbaum, was then inspected, and accorded well-deserved admiration. Mr. Parke, secretary of the Mohawk Society, gave many short cuts and formulae of marked practical value. Mr. Mason, of the Bellevue Hospital, introduced by Mr. MacDonald as the oldest photographer in active harness, spoke of his numerous inventions, all of them used by him daily. Mr. Leatherdale, of Toronto, spoke of the great practical benefits derived from coöperative advertising. Mr. Shaw, of Meriden, Conn., condemned the custom of selling tickets. Mr. Spellman, of Detroit, praised the value of changing the display every week. Mr. Mock gave expert testimony of the value of fires.

The second day brought out talks, discussions and demonstrations of marked value. It was regarded as the greatest day in the history of the society. Miss May L. Smith, of Binghamton, and Clarence H. White, pictorialist, author, instructor, occupied the forenoon. After the mid-day luncheon came Dudley Hoyt, with a fascinating and instructive demonstration of his method of posing and lighting that has given him a place in the sun. Emmie Gerhard showed what to do with a woman's hair, how patrons are approached and permanently won, and how the light-sources in her studio are used. She made another hit (the circuit), and St. Louis becomes another Mecca. Mr. Haley, he of a talented son, and Mr. Mock spoke in a humorous vein, and all thoughts of high prices and the war were dissipated. Mr. MacDonald talked on system, and around the deep impression he created linger the following epigrams:

"The value of a full stomach is far greater than any art."

"If you want to succeed, don't flirt with a brewery (distillery)."

"Don't work any more than you have to."

"Fill your appointment book for two weeks with names, then retire to a rear room and await results."

"If you want people to be confident of you, be confident of yourself."

"The real way to get rich is to be poor."

The evening recorded the usual banquet in the ball-room. A black band furnished the noise and, occasionally, even a little music, ably assisted by Pirie MacDonald, "Pop" Core, Mr. Zachariah and a few others. A prize, for all that is enviable, was presented to Emmie Gerhard, who will probably add the pretty silver dish to her collection of trophies.

On the closing day Frank H. Cole, of Asbury Park, talked on efficiency, using his photo-finishing plant as an illustration. W. B. Poynter, of Cincinnati, demonstrated a flash-lamp of his invention, and showed cor-

responding negatives. Those of children evoked general admiration. Retiring President Mix received a valuable gold watch and chain as a mark of esteem of the P. P. S. of N. Y. He almost responded, the surprise was so great. Unable to find words, he said merely, "Thanks."

The newly elected officers are: president, F. E. Abbott, Little Falls; vice-president, J. E. Mock, Rochester; secretary, E. U. Smith, Honeoye Falls; treasurer, Edwin Park, Oneida.

## The John Wanamaker Exhibition

MORE than eleven hundred pictures were submitted by two hundred and fifty workers at the recent Twelfth Annual Exhibition, John Wanamaker, Philadelphia. Fifty-five photographs were selected by the judges for special notice. The average quality of all the pictures submitted this year was superior to that of any former exhibition. The first prize (\$100) was won by Paul Strand; the second (\$50), by Leonard Westphalen; the third (\$25), by John Paul Edwards; the fourth (\$10), by B. F. Arniger; the fifth (\$10), by Karl Struss; the sixth (\$10), by Frank V. O'Connor; the seventh (\$10), by W. G. Fitz; the eighth (\$10), by Ernest P. Thurn; and ten \$5 prizes were awarded to the following: M. V. Browning, L. F. Denning, John Paul Edwards, W. G. Fitz, H. Crowell Pepper, Karl Struss, Edward H. Weston (2), Leonard Westphalen and John Wray.

## A. L. Coburn's Vortographs

CONSIDERABLE interest has been aroused in the London Camera Club by the exhibition of what their producer calls "vortographs;" and speculation is rife as to the method by which they have been produced. They are not representations of objects — at least they are not recognizable as such — but resemble more the mixed images seen when the eye is turned on cut glass, where various reflections overlap and mingle, and its facets and curves combine to give a medley of light and shade, sometimes with forms repeated and sometimes the reverse. We do not say that this is how they have been got, we do not profess to know; we only observe that this is what they look like. Their producer was to describe the means by which he has got them, on Thursday last, so that by the time this is in our readers' hands the mystery will be explained. Just what purpose they can serve it is hard to say. Some profess to see in them decorative patterns of wondrous beauty, while others avow that in the rooms of a camera club they should be turned to the wall. In the meantime they provide just that sensation and *réclame* in which Mr. Coburn delights, and we congratulate him both on having achieved his object and on furnishing a topic that to say the least is a fresh one.—*Photography*.

## The Pittsburgh Salon

WE have received the catalog of the recent Fourth Annual Pittsburgh Salon of Photography, which is unusually interesting. Two hundred and eighty-three photographs were hung, and they represented many forms of artistic expression. Among many well-known photographers who hung their pictures at this Salon were the following: George Alexander, Philip McCutcheon Armstrong, Rupert Bridge, Will D. Brodhum, Katherine Brucherseifer, C. W. Christiansen, Dwight A. Davis, William S. Davis, Edwin G. Dunning, Louis Fleckenstein, John W. Gillies, Louis A. Goetz, Forman Hanna, R. S. Kauffman, T. W. Kilmer, Wm. Ebert Macnoughtan, W. H. Porterfield, W. H. Rahe, O. C. Reiter, D. J. Ruzicka, J. D. Strickler, Edward Henry Weston, Paul Wierum and William H. Zerbe.



# WITH THE TRADE



## New Diffusing-Stops

THE Wollensak Optical Company, of Rochester, New York, makers of the Verito Diffused-Focus lens, announce their introduction of a set of diffusing-stops for use with the Verito lens in enlarging.

Heretofore, in order to obtain enlargements that possess a pleasing quality of diffusion, it was necessary to make a series of exposures at different apertures, making it rather impractical for the average photographer, as it was not an easy matter to gauge the exposure, at the different apertures, necessary for the enlargement.

The new Wollensak diffusing-stops for the Verito eliminate the necessity of different exposures, and, by employing one of these stops, an enlargement with a rare quality of diffusion can be obtained. There is no other method, now in use, that will produce just this quality of diffusion.

There are three stops to the set, governing three different degrees of diffusion, so that the operator can use whichever one suits his fancy. The price is \$7.50, which includes the adapting of these stops to the barrel of a new Verito, or of a Verito already in use. The manufacturers will be glad to send, to all interested, special literature concerning this new and interesting subject.

## Success With Autochromes

HENRIETTE HUDSON, the autochromist *par excellence* of New York City, is having brilliant success with the delightful Lumière method of color-photography. Her autochromes have been admired by connoisseurs, and she is now making important plates for some of the leading publishers in America. Her latest achievement consists of a number of successful autochrome plates of the interior of the Cathedral of St. John the Divine, particularly the stained-glass windows, chancel and the choir of this remarkably beautiful structure.

## The David Stern 1917 Catalog

WE have received the complete 1917 Catalog of the David Stern Company, of Chicago. It contains a very complete list of new and used photographic equipment, including up-to-date accessories. The lenses, cameras and other goods listed are of standard manufacture, and the greatest care is taken to see that each article is in perfect condition. According to their published guaranty, all goods purchased from the David Stern Company are sold subject to the approval of the customer; a ten-day trial is extended in every case, and the purchase-price is refunded promptly if the goods are unsatisfactory. Amateur and professional photographers, eager to practise economy, should write to the company for a copy of this interesting catalog.

## The Maryland Photo-Stock Company

WE are glad to hear that the Maryland Photo-Stock Company, of Baltimore, Md., has moved to the southeast corner of Saratoga Street and Park Avenue, Baltimore. This new location affords greater opportunities for business expansion and better service to customers. Without a doubt, the success attained at the old location will continue unabated at the new one.

## A New Artatone Pamphlet

ANOTHER attractive addition to Artatone literature has just been issued by the International Photo-Sales Corporation, 9 East 40th Street, New York City. The new pamphlet is interesting and authoritative, and essential to the correct understanding of Artatone manipulation. It is the intention of the distributors not only to do Artatone printing and enlarging, but to sell the paper as well. Amateur and professional photographers should write for the pamphlet, and photographic dealers should consider the advisability of carrying Artatone in stock.

## Ralph L. Fuller Company Sales Agents for Kathol

WE are informed by the Kathol Manufacturing Company that it has appointed the Ralph L. Fuller Company, 2 Rector Street, New York City, as exclusive sales agents for Kathol. The increased facilities thus obtained to market this excellent developer will result in greater distribution and improved service to consumers.

## W. Butcher and Sons, Ltd., Agents for Wollensak Lenses

WE learn that the well-known English firm, W. Butcher and Sons, Ltd., has lately been appointed sole agent in Great Britain for the lenses and shutters manufactured by the Wollensak Optical Company, of Rochester. Without a doubt, this new-formed relationship will prove to be of great advantage to the consumers and to the manufacturers.

## National War-Loan and Kodak, Ltd.

KODAK, Limited, has subscribed £150,000 to the National War-Loan, two-thirds of the amount being new money. The firm and its associated companies in Europe have now invested more than one and a quarter million sterling in the War-Loans of the Allies.

*British Journal of Photography.*

## A Word to the Wise

THE photographic season of 1917 is at hand. During the next few weeks amateur and professional photographers will prepare themselves for their summer work. *Now is the time* for photographic manufacturers and dealers to acquaint the photographic public with the goods to be placed on sale. The months of May and June are the most important of the entire photographic year. This fact should be reason enough to advertise, and to do it now.



## Queer Logic

"I WILL stop advertising; that will decrease my expenses."

"I will reduce wages; that will increase my profits."

"Then I will cut prices; that will put me ahead of my competitors."

Hush! Don't wake him up.

*Professional Photographer.*





## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

**THE BRITISH JOURNAL PHOTOGRAPHIC ALMANAC, 1917.** Edited by George E. Brown, F.I.C. Numerous illustrations. Price, 50 cents; cloth, \$1.00; postage extra, according to zone. New York, U. S. A.: George Murphy, Inc., 57 East Ninth Street, general sales agent.

Again we welcome the appearance of the bible of photography. We admire the courage and tenacity of purpose which characterize the publishers, who, despite the war, continue to produce this valuable photographic annual. In view of existing conditions, the 1917 British Journal is remarkable in point of size, reading-matter and advertisements.

The text includes helpful formulæ, standard tabular matter and the ever-interesting "Epitome of Progress," with its quotations from most of the leading photo-journals of the world.

This year "Chemical Notions for Photographers," written by the editor, is a paper of unusual value and interest to amateur and professional photographers. As always, the advertisements are attractive and instructive. British camera-manufacturers have much to offer the photographic world.

### Copyrights, Trade-Marks and Patents

To the Editor of PHOTO-ERA.

Sir:

Some time ago a reader of your magazine wrote me asking me to secure a Copyright on his Trade-Mark. I have had the same inquiry any number of times.

In view of the error, which is an excusable one, I wish to point out broadly the differences between Trade-Marks, Copyrights, Designs, Patents and Mechanical Patents.

The statutory fee for registration of any work, except a photograph, is one dollar, including a certificate of registration under Seal. In the case of a *photograph*, if a certificate is not demanded the fee is *fifty cents*. The life of the copyright is twenty-eight years, and it may be renewed at its expiration for twenty-eight years more. Applicants for copyright registration should use the application forms furnished on request by the Copyright Office.

A trade-mark may be registered by filing an application in the United States Patent-Office. A trade-mark is a peculiar distinguishing mark or device affixed by a manufacturer or merchant to his goods. It is a commercial signature, and the purpose of the trade-mark is to guarantee the genuineness of the product. The term of the registration of the trade-mark is twenty years, the Government fee \$10, and the mark may be renewed. If anticipated, registration is of course refused.

A design-patent is secured by filing an application in the Patent-Office for a new and ornamental design. To secure a design-patent, invention must be involved, although this is not essential to the validity of a copyright or trade-mark. If not anticipated, the inventor secures a design-patent for a period of three and one-

half years, seven or fifteen years, upon the payment of a Government fee of \$10, \$15 or \$30 respectively.

A "mechanical" patent may be procured by filing an application in the Patent-Office for any new and useful art, machine, manufacture or composition of matter, or improvement thereof. Invention must be involved. Patent is issued for a term of seventeen years and the Government fees are \$35.

A print is a device used for advertising-purposes, and is not attached to the goods, whereas a label is a device to designate the contents of a product, to which it is attached. Both are recorded without search in the Patent-Office upon a Government fee of \$6.

It is highly advisable that the services of a skilled patent-attorney should be retained to secure protection of these very valuable pieces of personal property. For instance, vast property-rights are based on trade-marks. It is said that each letter in the word "Uneda" is worth a million dollars, and the value of such trade-marks as "Coca-Cola," "Royal" Baking-Powder, "Sapolio," "Bon Ami," "Kodak," "His Master's Voice" with the symbol of a dog, and many others are well known. The rivalry of competing manufacturers is so keen, the value of a trade-mark is so great, and because the practice of registering a trade-mark in the Patent-Office is so technical, it is always advisable to secure the services of a competent attorney.

Before entering the practice of Patent and Trade-Mark Laws, the writer was an Assistant Examiner of Patents and Assistant Examiner of Trade-Marks in the U. S. Patent-Office. There, many hundreds of applications, both Trade-Mark and Patent, were examined by me, and I can say that in a great majority of cases the applicants were represented by attorneys. Those cases wherein the applicant prosecuted his case became hopelessly confused and his entire rights were jeopardized. The old adage, "He who is his own attorney has a fool for a client," was never more applicable than in Trade-Mark and Patent cases.

I trust that this elucidation will be helpful to your readers.

NORMAN T. WHITAKER.

Washington, February 28, 1917.

### Writing on the Back of Prints

Why photographers persist in writing on the back of photographic prints so that it shows through on the face, is a mystery. It is best to write carefully with a soft lead-pencil, not bearing on hard — even a fountain pen will do — on a place that corresponds with a very deep shadow in the picture. But to use a hard pencil, bearing down hard — and back of the sky or a large highlight, at that — spoils the print. For the purpose of halftoning, such a print is wellnigh worthless.

### Our "Miscellaneous" Quarterly Competition

MANY workers occasionally produce pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions. It should be borne in mind that pictures offered elsewhere and rejected may not be suitable.



## RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



Charles Raleigh and William V. D. Kelly, of Brooklyn, N. Y., have invented a method of Producing Colored Photographic Pictures, bearing patent No. 1,217,425. The inventor claims the method of recording color-values which consists in exposing the same panchromatic emulsion to both colored and substantially white light. The patentees have assigned their rights, by mesne assignments, to Prizma, Incorporated, a corporation of Virginia.

A Focusing-Attachment for Cameras has been patented as No. 1,217,728, by William Ehrlich, of New York, N. Y.

Charles F. Speidel, of Rochester, N. Y., has recently been issued a patent, No. 1,217,653, on a Camera-Back. Mr. Speidel has assigned his rights to the Eastman Kodak Company, of Rochester, N. Y.

Patent No. 1,215,534, for a Film-Magazine for Kinematograph or Motion-Picture Cameras, has been granted to Albert S. Howell, of Chicago, Ill. The gist of the inventor's claims is as follows: A film-magazine for kinematographic cameras comprising a suitable compartment for the reception of film, and provided with an opening for the passage of film, means for closing said opening, comprising a strip of material adapted to be moved across said opening, a device within said magazine for moving said strip, and an element actuated by the camera door adapted to move said device. The inventor has assigned his rights to the Bell & Howell Company, of Chicago, Ill., a corporation of Illinois.

A Method of Producing Kinematographic Films has been patented as No. 1,216,026, by Hartwell W. Webb, of Cresskill, N. J. The inventor claims, as his invention, the following: The herein-described process of producing printed kinematographic films and the like, which consists in, first, taking on a continuous strip a row of negative pictures representing successive phases of motion of an object; second, cutting this strip into sections and placing the latter side by side so that the first picture of each row represents the phase of motion following the one represented by the last picture of the preceding row; third, producing from the negative so arranged a printing-plate; fourth, making an impression from the said printing-plate upon a sheet; fifth, folding the sheet into cylindrical form and joining the overlapping transverse edges in a manner that the pictures are caused to run in succession and in a helical line, and, finally, forming by a cut running in a helical line a band from said sheet.

Patent No. 1,215,412 has been granted to William A. Riddell, of Rochester, N. Y., on a Folding-Camera Bed. Mr. Riddell has assigned his rights to the Eastman Kodak Company, of Rochester, N. Y.

Robert John, of New York, N. Y., has been granted a patent, No. 1,216,696, on Photographic Lighting. Patent rights have been assigned to the Iconochrome Company, of America, Inc., a corporation of New York.

A patent, No. 1,216,493, on Color-Photography for Films or the like, has been issued to Charles Raleigh, of Jersey City, N. J., and William V. D. Kelly, of Brooklyn, N. Y. What they claim is substantially as follows: 1. A composite photographic image having a color-selective value and non-selective values. 2. A composite photographic image having overlying selective and non-selective color-value impressions (Claims 3 to 10 not printed). Patent rights have been assigned

to Prizma, Incorporated, a corporation of Virginia.

A Photographic Developing-Apparatus has been invented by John S. Greene, of Rochester, N. Y. The number of the patent being 1,216,440, which has been assigned to the Commercial Camera Company, of Rochester, N. Y., a corporation of Rhode Island.

A patent, No. 1,216,948, on a Stereoscopic Device or the like, has been granted to Louis Joseph Emmanuel Colardeau and Jules Richard, of Paris, France.

A Photographic Printing-Apparatus has been invented by William C. Huebner, of Buffalo. Patentee has assigned his rights to the Huebner-Bleistein Patents Company, of Buffalo, N. Y. The number of the patent is 1,216,318.

### Kodak Bromide Pictures

A COPY of the long-heralded book—or, rather, brochure—published by Kodak, Limited, London, under the title of "Kodak Bromide Pictures, By Some Who Make Them," has been received by PHOTO-ERA. It comes up fully to expectations, as mentioned by the Cadbys several times in their "London Letter," and, moreover, is a credit to the enterprise and discriminating taste of its publishers. The pamphlet is devoted to the varied uses of Bromide paper as explained and illustrated by contributing master-photographers of international reputation; viz., F. J. Mortimer, editor of the *Amateur Photographer*; Furley Lewis; C. F. Inston; Will Cadby; W. Thomas, and A. H. Blake, preceded by a preface, sketches of the contributors and a generous introduction from the pen of Mr. W. L. F. Was-tell, distinguished as photographer and the entertaining and ever-cheerful writer, "The Walrus," in *Photography and Focus*. The concluding fifteen pages of the work contain lists of the various grades of Kodak Bromide Papers, working-instructions and formulæ.

In their articles, the authors explain, in simple detail, how they produce Bromide prints of high photographic quality, giving their own methods of working, individual tricks and dodges, keeping back nothing, even though they may not always agree with the publishers.

The illustrations are twelve full-page halftones and veritable masterpieces as follows: "The Elements of War" and "The Vigil" (stirring war-marines), F. J. Mortimer; two portraits, by Furley Lewis; "The Dock" and "Home to Dinner," C. F. Inston; "Child Portrait" and "April-Snow," by Will Cadby; "The Old Fishwife," by W. Thomas; "Sunlight on White-wash" and "The Embankment at Night," by A. H. Blake. Persons interested to obtain copies, for which no charge is made, are invited to address the publishers, London.

### Cleaning Measure-Glasses

For cleaning graduates which have become stained in use, go to the pantry and get the vinegar bottle; pour some into the graduate and also add a small quantity of coal-dust—say a tablespoonful. Wash the graduate well with the above solution, allowing the small coal to swirl round the inside with the vinegar. I have found that this is a quick and effective way to clean the graduate when the commercial hydrochloric acid usually recommended is not to hand.

*The Amateur Photographer.*





## LONDON LETTER



THE Postal Censorship has been considerably tightened lately, and this is our first letter to PHOTO-ERA under the new regulations. They necessitate a permit from the Chief Postal Censor, "To despatch by post, manuscripts to the Boston, U. S. A., photographic magazine called PHOTO-ERA." Postal packets sent under this permit are addressed and stamped in the usual manner, but are enclosed in an outer cover and addressed to the Chief Postal Censor, Strand-House, London.

In the midst of the most distressing and probably final phase of the great war — when we stay-at-homes are harrowed by the ghastly accounts of indiscriminate slaughter of noncombatants at sea — it is something of a relief to turn to "Vortographs." They seem to suggest the quintessence of peace — the attempt to escape from the dreary monotony of a dull craft in which there is nothing doing. And yet this dilettante-movement is born in the very crisis of the greatest war of all times — verily, a calm in the exact center of the storm. The reader will be wondering what "vortographs" are although the word may give the clue to those who are familiar with the principles of vorticism as set forth by Wyndham Lewis, Ezra Pound and Gaudier-Brzeska. "Vortographs" are photographs taken with the vortoscope, which, we are told, was invented late in 1916, presumably by Mr. Alvin Langdon Coburn, who had long wished to bring cubism or vorticism into photography. They are abstract pictures — that is to say, it is impossible to tell whether they are landscapes or portraits. An exhibition has just been opened at the Camera-Club of "vortographs." It also includes some post-impressionist paintings; but we may ignore these, as they do not immediately concern this letter. All the exhibits are by Mr. Coburn.

To give an idea of these pictures, we cannot do better than to quote a few sentences from the anonymous forewords to the catalog. The discussion at the opening — in which Mr. Pound joined — revealed virtually that he was the author:

"The vortoscope is useless to a man who cannot recognize a beautiful arrangement of forms on a surface, when his vortoscope has brought them to focus. . . . The modern will enjoy 'vortograph' No. 3, not because it reminds him of a shell bursting on a hill-side, but because the arrangements of form please him, as a phrase of Chopin might please him. . . . 'Vortography' stands infinitely above photography in that the 'vortographer' combines his forms *at will*."

Mr. George Bernard Shaw, who was at the opening of the show, declared that these "vortographs" gave him a very pleasant sensation. He was not sure why he liked them; but he thought that the quality of the prints had something to do with it. Mr. Coburn in his paper referred to the intense pleasure derived in making a "vortograph." It was the most enthralling form of art-expression he had ever indulged in, and, he added, that making a "vortograph" was like taking a journey into a strange and beautiful land. Here we feel that we are on firm and understandable ground. We are told that all the examples were done in two or three rooms. With the present difficulties of foreign travel, and the fifty percent rise in home-railway fares — well, the thing is economic, to say the least of it! We are recorders, not critics, and only lack of space prevents the chronicling of many more interesting facts concerning these "vortographs." But we may let out the secret that Mr.

Coburn proposes to return to the United States, shortly, and he will then organize "vortograph" exhibitions in New York and Boston, and thus our readers will have the opportunity to judge for themselves the merits of the new movement.

The new English one-pound notes — five dollars — have a particular interest for photographers in that, for the first time, the Treasury and Somerset House have been bold enough to employ one of the most up-to-date photographic processes for the main features of the notes. They are about the same size as the old ones — over which there were occasional scares as to possible forgery — but across the center of the new notes is a band of design connecting an effigy of St. George and the Dragon on the left with a medallion of His Majesty the King on the right. The medallion and the St. George picture are the work of Mr. Bertram McKennall, M.V.D., A.R.A., and the whole of his design is reproduced in photogravure — a process, we believe, that has never before been used for bank-notes, though it has been used with a certain amount of success for postage-stamps in Bavaria. The photogravure-design is complicated by a protective overprint in green and purple, so contrived that any attempt to separate photographically the main design from the overprint will be baffled by the combination of colors. At present, photographic science cannot screen off these three colors — photographic brown, green, and purple — so as to separate the prints in each color. Herein lies one of the chief elements of security against the illicit reproduction of the notes.

At last, the British public has been given a glimpse of the much-talked-of "tanks" — "His Majesty's Land Ships" — in battle-array. The latest film of the Battle of the Ancre shows — among many other sights of interest — close-up views of these wonderful new engines of destruction. We see them raging across "No Man's Land," tearing up barbed-wire entanglements and surmounting any other obstructions, while their guns are trained on the enemy-trenches. This last film is certainly the most realistic. One comes away from the Kinema with the feeling that he has really paid a visit to the front.

We have but scant space left in which to describe the little book just published by Kodak, Ltd., called "Kodak Bromide Pictures, By Some Who Make Them." In it six photographers have written articles on how they make their bromide prints, and there are two illustrations — exhibition pictures — of each man's work. As their methods and results vary extensively, from the lightest of snow-scenes to the strongest of portraits, the book forms an interesting collection of illustrated thoughts and ideas, and indicates clearly how those who wish may follow. There is an introduction by Mr. W. L. F. Wastell, who is distinguished alike as a photographer and as the author of those humorous pages which appear week by week in *Photography and Focus* over his pseudonym "The Walrus."

No expense or trouble has been spared in the make-up of the book, and we have never seen half-tone plates to rival the reproductions. We speak with experience, for one of the present writers contributed an article to the Kodak book, and he well knows the difficulty — the almost impossibility — to reproduce the excessively light work for which he is generally responsible. Kodak, Ltd., has reproduced the originals, in this case, with remarkable fidelity and success. The new booklet "Kodak Bromide Pictures" is being distributed lavishly in this country, and certainly it will be treasured by many. We have had a copy sent to the Editor, who may wish to form his own opinion concerning it.

CARINE AND WILL CADBY.

## Copying Lantern-Slides

A LANTERN-SLIDE, if it is good as a slide, does not copy at all well. The lighter tones are almost sure to be missing, although it has been said that they can be obtained by projecting the slide onto a good screen and photographing the picture on the screen. If this is not to be done it will be found that the best method to make a fresh negative from a lantern-slide is to illuminate it by reflected daylight and photograph it on an ordinary plate. If the slide is a warm-toned one then an orthochromatic plate should be used. Smooth white blotting-paper makes the best reflector, and to prevent stray light from veiling the negative the slide should be placed over an opening in a sheet or card in front of the reflector, the opening in the card being slightly larger than the opening in the mask.—*Photography*.

## Assistant Photographer, Reclamation Service (Male). United States Civil-Service Examination

THE United States Civil Service Commission announces an open competitive examination for assistant photographer, Reclamation Service, for men only, on April 18, 1917, at the places mentioned in the list obtainable from Civil Service Commission or postmaster. A vacancy in Washington, D. C., at \$1,020 a year, and future vacancies requiring similar qualifications, will be filled from this examination, unless it is found in the interest of the service to fill any vacancy by reinstatement, transfer or promotion. The duties of this position will be mainly those enumerated in the paragraph below as prerequisites for this position. Competitors will be examined in the following subjects, which will have the relative weights indicated:

| <i>Subjects</i>   | <i>Weights</i> |
|---|----------------|
| 1. General principles (including view photography, chemical manipulations, printing, toning, developing and redeveloping) . . . . . | 40             |
| 2. Bromide enlargements, lantern-slides, transparencies . . . . .   | 30             |
| 3. Training and experience . . . . .  | 30             |
| Total . . . . .   | 100            |

Applicants must have actual commercial experience in view-photography, bromide-enlarging, making good scenic lantern-slides, copying on dryplates, including color-copying with screens, preparation of developers, chemical baths and mixtures used in darkroom work, making transparencies on plates and celluloid-films, printing gas-light papers, toning, redeveloping, and some flash-light and portrait-work. A fairly detailed statement as to the amount of above experience should be included in the application. Statements as to training and experience are accepted subject to verification. Applicants must have reached their twentieth birthday on the date of the examination. Applicants may be examined at any place at which this examination is held, regardless of their place of residence; but those desiring appointment to the apportioned service in Washington, D. C., must be examined in the State or Territory in which they reside and have been actually domiciled in such State or Territory for at least one year previous to the examination, and must have the county officer's certificate in the application form executed. No sample questions of this examination will be furnished. Applicants must submit to the examiner on the day of the examination their photographs, taken within two years, securely pasted in the space provided on the admission cards sent them after their applications are filed. Tintypes or proofs will not be accepted. This examination is open to all male citizens of the

United States who meet the requirements. Applicants should at once apply for Form 1312, stating the title of the examination desired, to the Civil Service Commission, Washington, D. C., or to the secretary of the United States Civil Service Board at any place mentioned in the list printed hereon. Applications should be properly executed, excluding the medical certificate, and filed with the Commission at Washington in time to arrange for the examination at the place selected by the applicant. The exact title of the examination as given at the head of this announcement should be stated in the application form.—*Issued March 9, 1917.*

## The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman—an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skilful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker—professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the publisher of PHOTO-ERA on receipt of \$2.00 each.



*Photographer*—"Why did you tell my wife what time I came in this morning, after I expressly told you not to?"

*The Cook*—"Sure, Oi did n't tell her. She asked me what toime ye got in an' Oi told her Oi was so busy gettin' the breakfast that Oi did n't look at the clock."

*Town Topics.*





Photo by C. L. Oswald

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**To Contributors:** Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

**To Subscribers:** A reminder of expiration will be sent separately at the time the last magazine of every subscription is mailed. Prompt renewal will ensure the uninterrupted receipt of the magazine for the following year. Send both old and new addresses when requesting a change.

**To Advertisers:** Advertising-rates on application. Forms close on the 5th of the preceding month.

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## Photo-Era, The American Journal of Photography

WILFRED A. FRENCH, Ph.D., Editor and Publisher

A. H. BEARDSLEY, Assistant-Editor

KATHERINE BINGHAM, Editor, Monthly Competitions



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Cable Address, "Photoera"







EDITH WYNNE MATTHISON  
MISHKIN STUDIO



# PHOTO-ERA

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## Getting Meaning in a Picture

In Three Parts — Part III

C. H. CLAUDY



It is sufficiently obvious that the highly skilled photographer can do much of his "studies" without an actual camera or any exposure of plate. His eyes are his camera, and his picture-forming mind his exposed plate. Equally, of course, there may be — at the psychological moment — the subject, the light, the camera and the inspiration all at once — that happened to the writer once, and the result was a photograph for which there was a large demand, and from the negative of which prints are still selling, though its maker had not sense enough to demand a royalty, but sold the negative outright. But even with such a combination of fortuitous circumstances, there can be little claim to constructive art — merely praise for having had the wit to seize an opportunity!

In the last paper, some space was given to a mythical artist and a mythical conception, and a landscape was designedly chosen rather than figure-studies. There is nothing to be read into that paper against the practice of photographing pretty landscapes for the joy of preserving beauty. It is a protest against calling such work truly pictorial, or demanding, even by implication, praise for anything more worthy hosannas than the eyes with which to see. Any one can make photographs. Give a beauty-lover a camera and he will preserve beauty; but the function of the artist is to express meaning, *create* beauty, convey thought. Nature creates beauty, and a dozen men of science with a thousand instruments can show it to you — botanist with glass, zoölogist with microscope and astronomer with telescope, but they are not artists, nor is Nature herself one!

But there is less excuse for him who conceives a picture in which the human figure plays a part, and bulks the casual group and alters it with a title, than for him who does likewise with

the landscape. For while the landscape does, by the grace of God, sometimes express by accident a thought, a meaning, a mood, which we poor humans have within us, the human figure almost never expresses anything of the mood or thought of *another*, without that other's interference. Let a young girl into a library, give her an arm-chair and a box of chocolates, and she may curl up in the one and devour the other and make a pretty picture of youth, innocence, enjoyment, study and what not. But to take a photograph of her and title it anything else than what it actually is, "Picture of Girl, Reading," is to sin against the art that may be in those who look at your picture if it is not in yourself. Think up a pose, imagine a scene, a design, a composition, to express youth or beauty or innocence, and arrange your model, your light, your accessories, and you do something — grasping the chance good luck has put in your way may be praiseworthy, but it is never art.

It is these practices which have retarded photography in her recognition as an art, and not a mere craft. Photography — the mere making of fixed images upon paper — is too easy. Any child can go the road without falling — not a grammar-school student but can be taught to make even carbons in a month. There has never been any royal road to art, more than to knowledge, and the camera is no exception, though many have thought it is.

It is the near-artist, too, who has sinned against all real canons of constructive art, with his abominations of mounting and framing. The back-wash from that wave which rose and engulfed us all half a dozen years ago is still swashing about the feet of the uninformed. Every now and then, one finds nine pieces of parti-colored paper beneath a print, that so-called "multiple mounting" which shrieks to heaven of its shameless artifice. He who regards his photograph as the top of a pile of flat bricks, from which he will



build a monument to patience and the clever advertising of the fancy-paper maker, may enjoy his own productions, but few others do. And less understand them; and because, as a nation, we know yet but little of the traditions of graphic art, we have swept through our photographic exhibitions and kept silence when we found a gray on green, on gray, or on green with a brown print carefully poised atop the whole!

Similarly, the craze for oddities in mounting as to position. A tiny 2 x 4 print in the extreme south-east corner of an 11 x 14 mount passe-partouted has excited wonder, if not admiration, more than once. The breathless comments of the unselect have been both food for the scorn of the maker and amusing to the sane.

"What do you suppose he did that for? I can't make head or tale of all that paper. And why not in the middle? Oh, I suppose it's Art!" One can fairly feel the capitals with which the word is spelled.

Now there are certain well-known laws of vision which can be utilized in the mounting of pictures to their betterment. Thus, more space below than above gives a sense of balance — a print mounted in the exact center of a mount, particularly if the picture and mount are nearly square, seems top heavy. Similarly, if there be motion in the picture — a horse, runner, automobile, yacht — it may be increased or slowed up by mounting the print to right or left of center of the mount, provided it is not overdone to the point of absurdity. A racing boat going east, and nearer the east side of the frame than the west, suggests more speed than the same boat nearer the west side — space covered, in other words, suggests speed in the past more than space to be covered suggests speed in the future. Similarly, a picture in which a figure stoops over must have room to straighten up, or the beholder feels a mental cramp. Ask not why — or at least address your question to the professor of psychology and not to the writer. I but speak of what is known. All these true principles of mounting may be used to advantage by the maker of any photograph, be he artist or no. But to mount crookedly or oddly simply for the sake of being crooked or odd, actually puts the offender in the same boat with the self-styled critic who says:

"I don't know much about art; but I know what I like!"

The function of a mount to a photograph, a mat to a watercolor, a frame for any picture, is to isolate it from surroundings, provide a space about the picture on which the eye can rest without distraction. Anything in frame, mount or mat which attracts the eye from the picture shows that mat, mount or frame to be improper

for the picture it surrounds. Cunning use of scientific principles of vision have made of all three actual aids to the carrying-power of the picture, just as the painter calls on the electrician to light his picture from above and shade the light from the eyes of the beholder. If you have knowledge enough to frame a brown print in brown with a brown frame because your photograph is of autumn leaves, no one will quarrel with you for that repetition of motive in color. The musician repeats to monotony a tinkle of notes when he writes "The Song of the Brook" — Nevins', for instance — and the poet makes sound an echo to the sense, as when Pope alliterates:

"Soft is the strain when zephyr gently blows

And the smooth stream in smoother numbers flows,"

and there is no reason why the artist should not thus aid his color with an isolator of repeating tonality. But to put a green frame on a brown print, a red frame on a blue print or use forty different mounts of contrasting colors on any print, is to the educated eye about on a par with playing the piano while a child thumps playfully in the bass, or listening to the poetic effusions of some village-bard to whom a few feet more or less in a metrical line are too small to notice!

Not by mounting or framing or hanging is meaning put in a picture. Sometimes these things, ill done, do much to destroy both the beauty and appeal of a photograph which otherwise would knock loudly on the door which leads to the house of appreciation.

Of course, some one will ask here the ancient question as to how, if all this be true, the artist can stand glaring gold about his painting. And the two oldest answers are appended, because no one has thought of better ones. First, gold is about the only "color," if you call it a color, which will harmonize well with all other colors in a painting; second, gold represents to us that which is most precious; therefore we use it to honor our art, as a symbol of the care with which we guard it, the appreciation in which we hold it, the honor we would do it. But note well — your real artist does not use glaring gold, but old gold, quiet in tone, in his frames. Note also that the frames of browns and grays which will not fit with color will fit well with the monochrome of the photograph. You never see a well-framed etching in gold — and a photograph is closer to the etching than to any other form of graphic art. This fact should be apparent.

Art has sufficient of hypocrisy, pretense, buncombe and foolishness in and around it already, without the photographer adding to the tale. Because art is art and not a science, her terminology, even her aims, must always be more or



THE LAST OF WINTER

R. C. SCHULTZ

less obscure, and to be sought for in thought and feeling rather than with the microscope and the balance. But the real artist has a very definite idea of what art is, to him at least, and the art that is in him makes him labor to express that meaning to his fellows. Never by chance, never by luck, never by after-thought, does he work — always with labor, with pains, with effort, inspired and pleasurable though it may be. Who would add to the art of the world with camera and plate, who would put a meaning into his photographs and call them pictures by right and not by might, must follow this road and no other.

Education, study; study, education; effort, trial; trial, effort; thought, thought and once more thought — it is by these means only that meaning ever gets into canvas and paint, dry-

point and plate or lens and printing-paper!

Make all the records you want; make photographs of nature's beauty until the plate-maker is swamped in wealth; preserve for your edification and that of your friends anything and everything your lens can secure, and be happy in the doing, nor think the world, nor any part of it, will quarrel with you. But unless you have first a meaning in your mind, soul, heart; unless, first, you have a message, and, second, you put it on your paper with all the force and all the humility of one who but follows where great artists have trod before, do not profane what should be sacred, and a thing apart, by calling such photographs *pictures*, or by implying, with a catchy title, that you have brought forth in pain and labor when you have but profited by chance.



# The Electric Current in Bird-Photography

GUY A. BAILEY



ANY one who has attempted bird-photography, and used the uncertain thread or the bulb with its cumbersome tubing for releasing the shutter, must have wished for an electric shutter.

As far as I can find out, there is no such shutter on the market. It would seem to be a simple contrivance if there were a large demand for the product.

In the absence of such a shutter, I have substituted an ordinary electric bell, made over to serve the purpose. The only parts used are the electro-magnets, armature and frame. The hammer is removed and the shaft bent at right angle of the armature. The wiring is changed so that the interrupter is cut out. Two pieces of sheet-zinc, two inches by three-fourths of an inch, are bent to form a right angle and soldered together at the base, leaving a three-sixteenth-inch space between the upright portions. A hole is bored in

the outer zinc to admit the end of the bent shaft which normally rests against the second zinc. A piece of number eighteen copper wire, four inches long, is bent to form a loop. One end is fastened to strong thread that leads to the release, and the other end is fastened to rubber bands that are secured below. This apparatus should be fastened to a board, and the whole thing nailed to a support for the camera. The magnets should come directly under the shutter, so that the pull will come straight down. The wire loop is hung over the shaft and the rubbers drawn down tight and fastened. The thread should just reach from the wire to the release on the shutter. When the current is passed, the shaft will be drawn from the

loop and the rubber bands will pull the wire down, instantly releasing the shutter.

With this apparatus a bird may be snapped in any position it assumes. It acts instantly, and a speed of one-fiftieth of a second will be fast enough for any that moves only at the stroke of the armature. In some cases a slower speed may be used. With a lens working at F/4.5, it is possible to get good negatives in cloudy weather, and without motion, by setting the shutter for a slow-instantaneous exposure. It will require some time to find just the speed that is slightly faster than the reaction period of the bird.

At the present time I have seven of these

electrical releases, with all the necessary push-buttons in one window. Four of them are about one hundred feet from the window, near feeding-stations. One is set near a tree into which a hole was bored and suet placed for Woodpeckers, Nuthatches, Chickadees and Brown Creepers. These birds have been photographed many



A CROW FEEDING

GUY A. BAILEY

times; but the station is still kept up for them as well as for some uncommon bird that may come. There is a chance that the Redbreasted Nuthatch, Arctic Three-toed Woodpecker, or some other desirable stranger, may be the next visitor, and this is worth the effort.

The second camera is placed near a horizontal limb bored out and nailed to a post. This limb is filled with various seeds such as hemp, millet, rape and canary. Seed-eating birds will be attracted to this place. Among those that come to this particular station are Juncos, Song Sparrows, Towhees, Cow-birds, White-throated Sparrows, White-crowned Sparrows, Chipping Sparrows, Swamp Sparrows and, most abundantly



VIEW OF FEEDING-STATIONS  
PHOTOGRAPHIC TRAP ON TOP OF AN OAK

GUY A. BAILEY



of all, English Sparrows. Ninety per cent of the seed put out are eaten by these pests. Still, I give them credit for leading the way. It is their noisy feeding that attracts any other bird within hearing. I do not find that they really keep the others away; for most of the others mentioned will eat with them. The Song-Sparrow is more belligerent than the English Sparrow. I have seen a Song-Sparrow drive away three English Sparrows, attacking them savagely. It is the usual thing for the English Sparrow to give way to the Song-Sparrow.

A third feeding-station is a horizontal limb like the second, but mounted on gas-pipe, which is provided with a large funnel, to keep down the squirrels. The food used is crumbs of fried cakes, sunflower seeds, and other foods that the squirrels eat. The numerous gray squirrels are given plenty to eat; but we prefer that it come from some other place than here. Robins, Grackles, Searlet Tanagers and other birds are fond of the doughnut-crums; Goldfinches and Nuthatches eat the sunflower-seeds.

A fourth feeding-place is near a stump in a ravine. The stick is bored out and a hole about two and a half inches deep by three inches long made. The sides are lined with copper, and the bottom covered with plaster of Paris. In this are placed meal-worms. The smooth sides prevent



RED-HEADED WOODPECKER  
GUY A. BAILEY



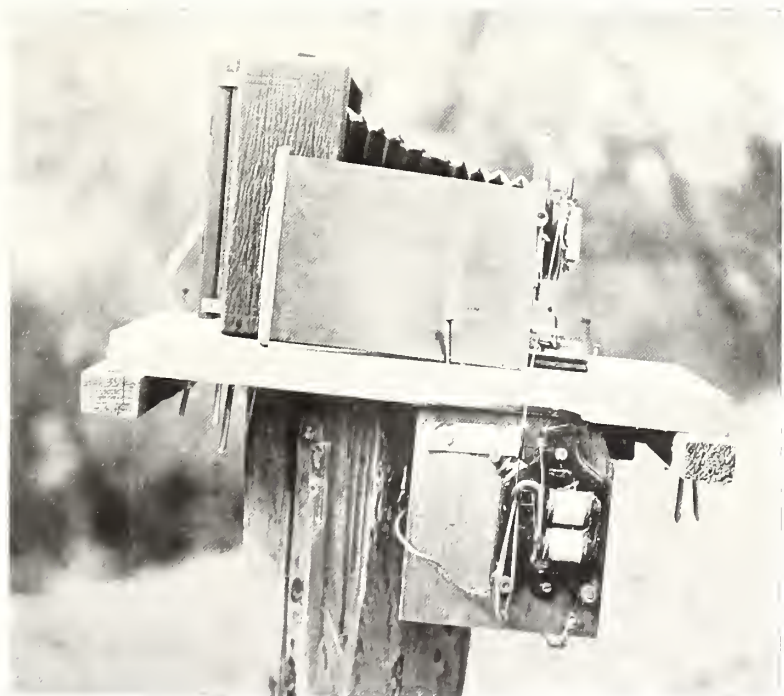
PURPLE MARTIN

GUY A. BAILEY

them from crawling out, and the white bottom makes them conspicuous to the birds. This is intended for Winter-Wrens, Fox-Sparrows, and Thrushes. It is always in the shade. To make it possible to use a quick exposure, light is thrown from a large mirror, controlled from the window where the push-buttons are located.

The fifth feeding-station is in the middle of a pasture-lot about five hundred feet from the window. It is surrounded with a fence, to keep the cattle from disturbing the camera. The food used is seeds, crumbs and meal-worms. Meadow-larks, Sparrows, Crows and Flickers have used this station so far. Other birds of the fields are expected in due time.

A sixth station is located about eight hundred feet away. A limb is driven into the ground. A hole is bored in the top and two other holes are bored in the side of the limb. The stick is three inches in diameter and extends about sixteen inches above the ground. English-walnut meats are put in the hole in the top. Red-headed Wood-



OBSERVATION-ROOM AND ELECTRIC SHUTTER-RELEASES  
CAMERA SHOWING ATTACHMENT OF ELECTRIC RELEASE

GUY A. BAILEY





TREE-SWALLOW  
GUY A. BAILEY

peckers are constant visitors when this food is used. Doughnuts and seeds are placed in the holes in the sides. Crows, Meadow-larks, Grackles, the various Sparrows, have already visited this station. It was set up for the purpose of attracting Pheasants, Quail and those birds that keep away from the buildings. Of course, the other more familiar birds were to be expected.

The seventh circuit does not run to a feeding-station. The ap-

paratus is placed in the top of an oak tree, sixty feet from the ground. Three ladders mounted permanently in the tree make the ascent easy and rapid. The camera is focused on the end of the tallest limb in the tree, all other limbs near having been cut out. This tree has for years been the lookout for a great variety of birds. Shrikes, Sparrow Hawks, Cowbirds, Bluebirds, Grackles, Grosbeaks and many others have perched in this tree, but thus far have been out of reach of a camera. This place has just been arranged, and no pictures have yet been taken.

The tree itself is not visible from the window, and, to overcome this difficulty, a large fine mirror has been set up in the pasture-lot. The mirror is set at the proper angle and, by focusing a telescope on the mirror, the top of the oak is watched. I should add that all the stations are covered with telescopes permanently mounted and focused on them. These telescopes are just over the push-buttons in the window. Even those that are one hundred feet away have telescopes, for at that distance it is necessary positively to identify the birds, and to be sure of their exact position before touching the button.

Seven years ago, I started a permanent feeding-station, using only snet for food and a string to release the shutter. From year to year the number has increased and the kinds of foods varied. I find it best to use certain foods regularly in the

same station. There is more chance to get the birds you want if you increase the number of feeding-places.

One might imagine that after two or three years few new subjects would offer themselves. On the contrary, each year of the seven has brought some new species. Earlier in the work there were more. In these seven years, Scarlet Tanagers came but one year; Towhees, one year; Swamp-Sparrows, one year; Cowbirds, two years; Fox-Sparrows, one year. Of course, there are many that come regularly each year, and that gives a chance to improve the pictures that were made previously. Then, there is that long list of migrants that may stop if you can get the right food, bath or perch. These are the ones that keep you always hoping.

These feeding-stations, with the telescopes, give you an opportunity to study the birds when they are absolutely undisturbed by your presence. The boxes with the cameras become part of the landscape, and birds are not at all dis-



HAIRY WOODPECKER

GUY A. BAILEY

turbed by them. Even the click of the release, after a time, becomes a familiar sound.

The four feeding-stations nearest the window have a favorable location by nature. Below them is a wooded ravine that opens out into a pasture lot. Birds that move from the lowlands for shelter would come to the stations. The English Sparrows are the decoys that lead them on. Above these stations there is a spring that is open the year 'round, and draws many birds.

This ravine is located in the village of Geneseo, N. Y., near the Normal School building. There are residences close at hand. House-cats roam through this ravine early in the morning and late in the afternoon. Of course, they catch many of the birds, and frighten others away. Some of them hide in the camera-boxes, and

pounce on the birds from this vantage-point.

It is most unfortunate that we have no legislation against roaming cats. They are roaming mostly because they are improperly cared for or insufficiently fed at home. It is common for people to own cats and let them "hunt for a living." It means often that they feed on birds.

It is entirely legal now to keep a cat that lives on song-birds. A large number of people are not keeping cats because they do feed on birds. If public sentiment continues to increase, the cats will be less numerous and the birds will have a better chance. Any one who tries to feed the birds will find that the cats are a nuisance, and will be willing to aid in procuring legislation to protect the birds from this their worst enemy.

Courtesy of *Bird-Lore*.

# Red Bromides

DAVID IRELAND



OR the production of what is known as the "red-chalk" tone, the favorite formula has hitherto been one requiring in its make-up a large proportion of neutral potassium citrate, a chemical not usually stocked and consequently unhandy to obtain at any time, now, in company with most other potassium salts, only to be had at a very enhanced price. The writer has therefore been led to make trials in other directions, and is now able to give particulars of a method to produce red tones of a particularly pleasing nature, with sparkling highlights, the print being free of the dull and sunken aspect hitherto characteristic of copper-toning.

To those who are contemplating the production of red-chalk pictures for the first time, it may be well to say that in the case of most subjects — landscapes particularly — the bromide print must be exposed and developed to such an extent as would render it useless if left in the black; this, indeed, is one factor that makes for the superiority of the red-chalk print over one in black and white from the same negative.

Granted that the negative one is working from is robust and well graded, the extra exposure enables the entire scale of gradation to be recorded on the print, which in the subsequent process of toning loses its heaviness and becomes a thing of charm.

The toning-bath is made by dissolving

Copper sulphate .....20 grains  
Potassium ferrieyanide .....10 grains  
In water ..... 3 ounces

This produces a muddy greenish fluid, to which is added sufficient of a saturated solution of ammonium carbonate to dissolve the precipitate and leave the solution a clear, slightly greenish blue. After this stage has been reached, another half an ounce of the ammonium carbonate solution is added. As the ammonia salt is of a very volatile nature, the quantity required will vary according to its condition; if fresh, about 200 grains will be required, and this is represented by two fluid ounces of the saturated solution.

The bromide print, which has been fixed and washed in the usual way, is flowed with enough of the toning-solution to cover it, and passes through a series of colors of increasing warmth. In the early stages some most agreeable purples are produced, and, of course, the operation may be arrested at any moment. For red tones, however, the print is allowed to remain until action ceases, when ten minutes' washing follows. It will now be seen that a slight pink tone pervades the highlights, and this is removed by a brief immersion in

Liquor ammonia (strong) .....30 drops  
Water ..... 6 ounces

Used in these proportions this clearing-bath will not affect the density of the print; used stronger it will, so that means of local or general reduction are at hand if required. After another five minutes' washing, the print may be laid out to dry.

The toning-solution may be used for two prints in immediate succession; after that it should be thrown away. The cost is trifling.

*Amateur Photographer.*



# Filing Negatives and Prints

WILLIAM S. DAVIS



One's collection of photographs grows, the need to adopt some simple and effective filing-system for both negatives and prints becomes imperative. Especially, for the serious worker who accumulates a number of interesting and varied subjects which are used frequently in one way or another, and which require a means of ready reference. However, since individual requirements vary, I will simply mention different practical filing- and indexing-methods and leave the matter of selection or adaptation to interested readers.

In the first place, no matter what method is adopted, all negatives should be numbered, as in many cases it is quite impossible to identify clearly a given one by title alone. As far as possible, it is best to number consecutively, thus avoiding any chance of confusion between numbers; but there are times when an exception may be made in favor of numbering in series, as, for example, when an entire collection along one line, or representing one locality, is kept together. In such instances, a code-letter or number is used in connection with the serial number of the set. I found it advantageous to number my small film-negatives independently of the larger ones on glass-plates, so that each film-negative number is preceded by the letter F, as F1, F2, etc. These numbers, together with titles, are written in waterproof India-ink on the back of each negative over the blank spaces left on the film between exposures. By taking care to leave all this margin at one end when the negatives are cut apart after the strip is dry, there is space for considerable data if written with a fine pen. All these data show on the untrimmed record-prints. Glass-negatives may be numbered on the blank space produced by the rebate of the holder, but this need not be done when they are kept in envelopes or "preservers," as the numbers — and other data — are written on the wrappers instead, including of course the file-number or letter, together with other data.

There are a number of convenient ways to store negatives. For films there are special books, usually known as film-albums, which are, perhaps, the best for average amateurs. Another good system, however, is based on the card-index — the outfit consists of a case with numbered cards which act as separators for each negative. Still another plan is to use ordinary negative-envelopes and attach numbered gummed

labels to one end in such a position that the numbers are all visible when on file. By any of these methods, hundreds of films may be filed in one case in regular order, or divided by special cards into groups according to subject-matter.

Similar filing-methods are available for negatives on glass. Boxes are now supplied of the proper size to accommodate fifty or one hundred plates. Though — for that matter — any one who is handy with saw and hammer can make file-boxes from small packing-cases. Many prefer to use the original cardboard plate-boxes for the finished negatives on account of simplicity and lightness in handling. As these are usually made in three parts, the inside box can be discarded, thus making more room. By placing a length of tape — or strip of strong paper — in the bottom of the box before filling it, the negatives may be removed more easily. Although the plates may be stored in this manner without anything between them, it is safer to employ some kind of separator to guard against marring the negatives. Packing them face to face with waxed-paper between will serve, though I prefer to use the translucent "glassine" negative-preservers, as they take up very little space, yet afford protection when the negatives are removed and stacked on the work-bench ready to be printed or examined.

Because the negatives are numbered consecutively, it does not follow that they must be stored always in similar order. This is a matter of personal convenience, depending somewhat on how many sizes there are, or whether it seems best to file by the subject-matter represented. If properly indexed, no trouble need be experienced to locate a negative in any case.

To avoid confusion, all boxes — or file-cases — should be plainly marked with an individual number or letter; and, if negatives are kept in consecutive order, it is an added convenience to place below the individual letter the numbers of the first and last negatives contained therein.

To render any negative "get-at-able" without trouble, some sort of an index must be kept. In some instances it is sufficient simply to add the filing-case number to the data in one's exposure note-book, or write the list of titles, as the pictures are made, in a separate blank-book, giving first the negative number, then the descriptive title, and lastly the number of the filing-case in which the negative may be found. However, none of these methods provides for the classification de-



CLAUDE L. POWERS



### HARBINGER OF SPRING

Behold within the woods a touching thing,  
A sacrifice to Winter made by Spring:  
On trembling stem, in waxen, shell-pink cup,  
Arbutus' fragrant soul is offered up.

ROBIN ALDEN.



sirable when a large collection is to be dealt with; on this account a card-index or loose-leaf book is better. By adopting such an index, the titles may be entered according to the subject-matter represented — or in any other manner which personal convenience requires — and, when the file is being constantly drawn on for illustrative purposes of any kind, it becomes still more effective if all subjects which might come under more than one head are cross-indexed. For instance, one might have a view of Fifth Avenue, New York, showing some notable building — such as the Public Library — in addition to the busy street-life. Now a negative of this kind could be indexed under all of the following classes — as a Street-Scene under “S,” a New York view under “N,” Fifth Avenue under “F,” Public-Building under “P” and Architecture under “A.” In this way — whichever one of these five subjects might be uppermost in mind — one could not fail to locate the negative. All of this may sound like a lot of fuss and trouble — usually such complete cross-indexing would not be required — but it is surely better to spend five minutes to index a subject than to waste five hours hunting through hundreds — or thousands — of negatives trying to locate one that it is important to use at short notice. Be assured the time is well spent.

Another way — and one I think in many respects to be the best, since it combines the card-index principle with other valuable features — is to use record-prints instead of index-cards. By so doing the suitability of a picture for any purpose may be determined at a glance without having to look up the negative. Wherever there is a large number of studies along similar lines, it is much easier to pick out the one wanted in this way than to rely on written description alone. The neatest way to employ prints for this purpose is to take the largest sized negatives as the maximum standard of size, and print all the subjects upon paper of this measurement, using a mask for the smaller negatives. As fast as prints are made the negative-number, title and filing-case number of negative should be written on the back. Films marked as previously described will record the data automatically, if care is taken not to hide same when printing under a mask. The prints may then be inserted in a filing-box of suitable size, divided by cards lettered alphabetically, or bearing such class titles as CLOUDS, LANDSCAPE, TREES and PLANTS, HISTORIC SPOTS, ARCHITECTURE, MARINES, ANIMALS, GENRE STUDIES, PORTRAITS, and so on, into as many divisions as circumstances require. If a group grows to considerable proportions, it is advisable to subdivide. LANDSCAPES, for ex-

ample, could be separated into classes by seasons of the year, or special effects, as Fog and Mist, Rainy Days, Sunsets, Night Scenes, etc. Cross-indexing is, of course, accomplished by making duplicate prints, when necessary, and filing under various heads.

As an alternative, ordinary prints of various sizes may be attached to the pages of a loose-leaf album — several kinds are sold at very moderate prices — thus permitting equally good classification by inserting leaves containing fresh subjects in their proper places. By using albums that are uniform in style — to allow interchanging of the leaves — the collection may be expanded to any degree without altering the classification. Still another way is simply to place the proofs in loose wrappers, or envelopes — bearing letters or other identifying marks — and to keep these in portfolios or boxes. When making index- or record-prints, I use any sort of printing-paper that is handy, taking only reasonable care in manipulation to make them permanent enough for future reference. In addition to the number and title I often place interesting technical data on the back — copied from my field exposure-book — and, if the subject is one which needs to have clouds printed-in, the number of cloud-negative is noted, or — better yet — another print showing the combination is also filed. Then, too, as a convenience when going over a lot of prints to select subjects to send out to a publisher or to an exhibition, I note on the back whether or not the finished prints have been used, thus saving the trouble to look over a separate card-index to find out whether a particular picture has already been placed where it might interfere with the purpose in mind through duplication.

After a satisfactory system of filing and indexing has been selected, it is natural to consider attractive ways to preserve and to show finished prints or enlargements. No doubt the most compact manner of preserving them — combined with a pleasing effect — is to print each picture on double-weight paper of appropriate surface texture and considerably larger in size than the picture — say not less than an 8 x 10 sheet for a 5 x 7 negative. An assortment of masks is easily made from black paper. The openings should range from long panels to nearly square shapes, and should be in different sizes, to fit any composition. However, avoid fancy openings, as they invariably give a trivial appearance to the result. In cutting the masks, always make the opening above the center, so the print will have the greatest margin at the bottom, or at least more than that allowed at the top.

If negatives are printed by contact it is necessary to have a large frame to receive the paper.

The negative is then supported on a sheet of glass and kept from moving about by means of a thin cardboard cut-out — the printing-mask being laid over all.

When making enlargements the masks are simply placed in contact with the sensitized surface of the paper, and for this purpose it is sometimes more convenient to use masks made from light cardboard, instead of paper. Should a gray border be preferred in place of plain white, it may be obtained by double-printing.

To produce a panel or "plate-mark" effect on the prints, lay a piece of hard-surface cardboard — the size of the mark desired — in posi-

tion over the picture; turn the whole face down on a table, and rub the back with a hard smooth tool — such as an ivory paper-cutter — working along the edges of the plate-marker until a clear impression is obtained.

A large quantity of prints, finished in this style, is stored readily in a portfolio, or if it seems more desirable, the prints may be bound into books by gumming strips to one edge — or allowing about three-quarters of an inch extra margin on the left-hand side of the sheets when printing — then punching holes to accommodate cord, ribbon or metal fasteners. Prints attached to flexible mounting-paper pack well.

## A. L. Coburn's Vortographs

ANTONY GUEST



R. A. L. COBURN is a photographer of such undoubted skill and originality, and one, moreover, who has taken so vigorous and prominent a part in the pictorial movement, that whatever he does should command some interest and respect. Yet it is very doubtful whether such feelings overcome perplexity among the general body of visitors to his show of "Vortographs and Paintings" at the Camera Club. Indeed, at the time of my visit, there were some who held that the work was not to be taken seriously, and that Mr. Coburn was laughing in his sleeve at a bewildered public. This is the sort of thing that every daring innovator must expect. Mr. Coburn's inventive genius, however, is little influenced by criticism. He pursues his own path, and it has now led him to the wild region towards which those who have watched his advance might have guessed that he was tending.

It has been a logical journey, and, except that the final slide has been rather sudden, no one ought to be surprised. His leadership of the advanced American school emphatically marked a divergence from the ways of nature into a side-track where her inspiring truths gave place to an independent, and one might say egotistic, personal expression in terms combining a sense of decorative arrangement with a free adaptation of the appearances of reality to the impulses of the moment. Individuality is a good thing; but it was getting out of bounds, and some thought it was approaching eccentricity. The seduction of natural atmosphere was scorned as commonplace, and now it seems that the raging winds of the vortex have been adopted instead.

Something strange was bound to happen when the sure guidance of Nature was rejected. But it cannot be doubted that, from Mr. Coburn's standpoint, the work now exhibited is perfectly serious and consistent. It will be puzzling to most amateurs, who look for suggestion and matter for emulation in the example of the leaders; but there are still aspects that call for friendly, if not in all cases appreciative, consideration.

At a first glance the vortographs look rather explosive — they represent none of the ordinary experiences of human vision, and are not intended to do so; but they exemplify photographic possibilities of forming mere pattern, i.e., arrangements of line and tone, aiming solely at abstract design without any illustrative purpose. It is a new object for the medium, but whether it is a satisfactory way of giving effect to the essential powers of the camera, and showing its properties to the best advantage, is another question. In any case credit must be given to Mr. Coburn for developing a novel technical method that enables him to record his decorative imaginings with fine tone-gradations.

How far he has succeeded in this way in producing beautiful effects comparable to scientifically ordered but still imaginative combinations of musical notes is a question that may be answered differently by individual judgment. In a general way, the principles of decorative art, which deals in flat tones, simple masses and harmonious lines, are not closely followed. The introduction to the catalog says: "The modern will enjoy vortograph No. 3, not because it reminds him of a shell bursting on a hillside, but because the arrangement of forms pleases him, as a phrase





A NEW ENGLAND LANDSCAPE

WILLIAM E. MACNAUGHTAN

of Chopin might please him." For my part, it reminds me of nothing in particular; but there are lines and tones springing from a common center, and so it has some interest merely as a composition. Numbers 11 and 14 have curves, rectangles and tone-gradations suggestive of design, but mostly the decorative purpose is obscure. Signs of definite intention to obtain effective if not ordered arrangement may generally be traced, but few will find fascination in the first impression.

It may be doubted whether those amateurs who feel that they have still a long way to go in pursuit of the mystery and poetry of Nature will discover anything helpful in the show, though they cannot help being impressed by Mr. Coburn's inventiveness and technical resourcefulness. Turning from the photographs to the paintings, one recognizes indications of individuality and skill in the use of the brush, though "the simple, homely qualities of unashamed realism," for which the artist confesses his fondness, are not altogether apparent in the examples of vorticism, and the works in which artificial color-schemes have been devised, presumably for decorative effect. Boldness and breadth are notable characteristics, and there is vigorous design in such a work as "Willows," where, however, the shadow of the foreground tree contradicts the

direction of light as indicated elsewhere. A feeling for sunlight is manifested in "A Berkshire Village," and in some other examples, in combination with a simplicity of statement carried to a point approaching *naïveté*. "Rim Edge," one of the Grand Canyon group, is perhaps the most pleasing specimen of a decorative color-effect.

The show is certain to arouse curiosity, and probably also a good deal of comment from divergent standpoints. It marks an entirely new departure in camera-work, and for this reason, if for no other, should engage the attention of all who are interested in photographic progress. But from some points of view the work is most notable as the expression of an interesting individuality that after unsurpassed experience in all branches of photography has been drawn into extreme courses as an inevitable result of following predilections in a particular direction. Before Mr. Coburn's guidance along this path can be accepted, it may be well to ask, "Where does it lead?" To me, it forcibly suggests the need of a return to Nature, the only sure basis of original design and imaginative representation, and the one inexhaustible fount of artistic sustenance. From this and other standpoints, the show, which remains open until the end of February, may induce useful and beneficial reflection.

*The Amateur Photographer.*

# Burson — and a Girl

MICHAEL GROSS

**I**F the truth were to be told, it was his meeting "the girl" that made Burson hustle out and find a position the very next day after he had resigned — by mutual consent — from the "pyro-prison," as he called his last place of employment.

True, a combination behind-the-counter salesman, darkroom-expert and stock-clerk in a little photo-supply store, on a dingy side-street, was more of a "job" than a "position;" but Burson did not start until he had a long talk with the proprietor, in which he explained how necessary it was that he make rapid advancement. The proprietor had assured him that if he attended to business and worked hard there was a good chance that he would be made junior partner.

So Burson accepted the offer and started to work that morning. He felt confident that, possessing the love of the ethereal creature he had met only a few nights before — although he felt already as if he had known her for years — he would climb high. He told himself that she was the kind of girl of whom men say, "She made me the success I am." He resolved that no obstacle would be too great to overcome for her sake, and that no goal would be too high for him to reach. Of her love he felt sure, for had she not given him two dances in succession the first night he met her, and then allowed him to hold her hand all the way home. And she had told him, a little while afterwards, that she never went out much with boys, then, blushing with maidenly modesty, she had gently chided him when he asked for a good-night kiss, telling him that she never allowed herself to be kissed by a young man. He liked her all the more for that. It was right for a girl to be chary with her kisses. Yes, she was the mate for him — of that there was no doubt — and worth all the hard work he would be called on to do, to win her.

As Burson stood behind the "films developed" counter, at the end of his first day, his thoughts were filled with the glorious success he expected to make and of the girl he would win with it, when he was startled suddenly out of his day-dreaming by the tinkle of the little bell on the door. Looking up, he saw a rather foppishly dressed young man come in and stroll slowly toward the counter. The newcomer carried a silver-tipped cane, which he swung forward with every mincing step. On his nose rested a pair of tortoise-shell glasses, and a freshly lit

cigarette dangled from his lips.

"A regular mama's boy," was Burson's rapid summary; "I'll bet he wears an ankle-watch, and has a lace-handkerchief concealed somewhere up his sleeve. I wonder whether my girl could ever like that kind of a fellow," was his next thought; and the fancy made him smile, for he remembered her saying, only the night before, "The first thing that attracted me to you, Mr. Burson, was the fact that you were a man's man, and not a sissy." That was the word — "sissy" — and it just described the fellow now standing before him at the counter.

"May I have these fillums developed at once and a print made from each?" he was saying ingratiatingly; "I'm rather" — he pronounced it "rawther" — "anxious to see how they turn out."

Burson was about to make a brusque remark, when the words of his new boss, spoken only that morning, came back to him, "Treat every one who comes in, whether man, woman or child, as nicely as you know how. My customers will soon like you so much that they will always want you to wait on them. I'll have to take you in partnership then, or you'll open a store of your own, up the street, and take my trade away from me."

Consequently, instead of being rude, Burson merely said, "I'm sorry, but I'm going home in about an hour. However, the proprietor will take my place, and I'll tell him about your films as soon as he comes in. If he develops and prints to-night — and I'm almost sure he will — you can get your pictures to-morrow morning, at about ten o'clock. Will that do?"

"It certainly will," was the answer, "and I can assure you that the favor will be appreciated."

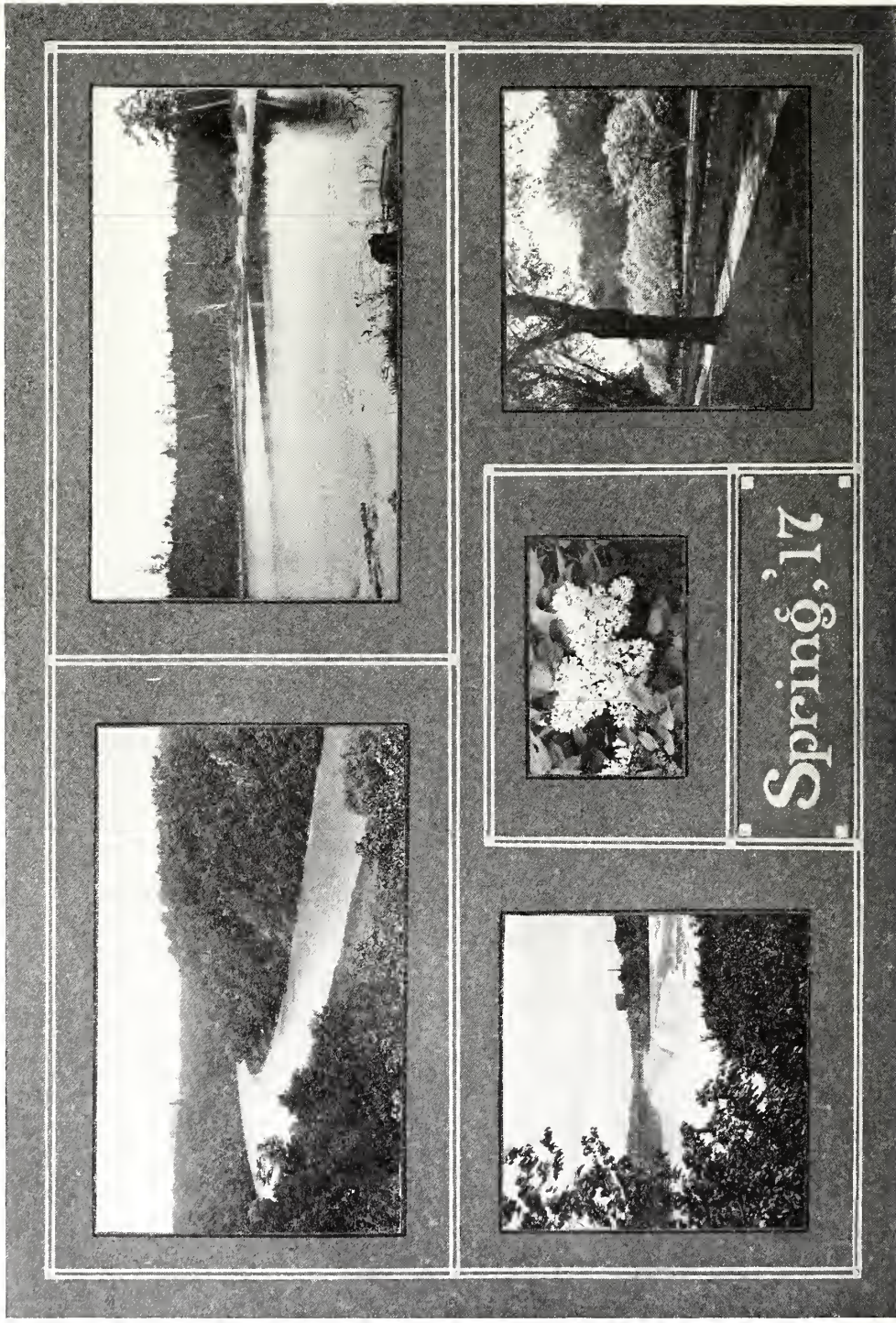
Burson put the roll of film into an envelope and marked it "rush." Then he took down the name and address, made out a ticket and handed it to his customer, with a brief, "To-morrow at ten, it is, then."

"I'll be in," the young fellow promised; and with a soprano-pitched voice he said "Good-night," and walked leisurely out of the store.

At six o'clock the proprietor came in and took Burson's place behind the counter. Burson, after explaining about the roll of film that had been left for immediate development, went home.

After a never-to-be-forgotten evening spent with his girl, Burson came in the next morning prepared to move mountains, if it would bring him any nearer to an immediate promotion. So enwrapped was he in a maze of fair and roseate





dreams regarding the future, when he would be junior partner, and his girl—he would be married to her then, but she would still be “his girl”—would come for him in their automobile each evening, that he forgot all about the prints that had been promised for ten o’clock that morning. It was not until he saw the young fellow coming through the door that he suddenly recollected the matter. Then he gazed frantically along the shelf where the finished work was kept. An exclamation of delight broke from him as he saw the envelope he had handed the boss lying on the shelf. The job had been taken care of, for he could see the edges of the prints protruding from the envelope. Before the customer had a chance to inquire if his pictures were ready, Burson handed them to him, remarking as he did so, “We always live up to our promises, you see. Promptness is a business asset.”

The young man nodded his thanks, and began feverishly to examine the prints. Burson watched his nervous haste with an amused smile.

After gazing intently at each print for a few moments, the chap looked up with a broad grin on his face. “Great stuff!” he exclaimed. “That is, for the chap who did the posing. But I’ve got another roll of film here,” he continued, laughing, “that I’d like developed and printed. The other fellow took these pictures of me. Sort of evened things up for the time I was behind the camera and he was having all the fun.”

Burson, unable to make head or tail of the conversation, must have betrayed the fact by the blank expression on his face, for the customer suddenly shot the prints across the counter, with the words, “Would you like to have a look at them? They’re rather sentimental.”

Burson smiled broadly at the words and picked up the top print. He gave one glance at it—then earnestly wished he had n’t. The print showed a young man and a girl in a fond embrace, either about to begin or conclude a kiss. But it was not the impropriety of the pose, nor yet the silly smirk on the fellow’s face, that made Burson go suddenly white and then drop the print from fingers that had begun to tremble.

The girl about to be kissed was *his* girl—the girl he loved to distraction—for whose sake he had willingly started in this humble position and for whom he had determined to carve out a future for himself—and her. The same girl, moreover, who had so blushing confessed to him that she never went out with fellows, and had never been kissed.

In a sudden burst of frenzy, he shuffled through the rest of the prints. Each showed his girl—how foolish that word “his” sounded now—in a fond embrace, and evidently enjoying it. Then

the young fellow’s words came back to him, “I sort of evened things up for the time I was behind the camera.” He had done the kissing this time, no doubt, was the thought that scared its way through Burson’s benumbed brain.

The customer, surprised at the expression on Burson’s face, broke the silence by saying, “What’s the matter—you look as though you has seen a ghost?”

“I h-h-have,” Burson stammered, “it was the ghost of a lost hope.”

“Why! Do you know that girl?” the other asked hurriedly.

“I thought I knew her well,” Burson answered meditatively, “but I’ve just discovered that I did n’t.”

“What a strange coincidence,” was the other’s comment.

“Too much of a coincidence,” Burson remarked savagely. “I suppose that other roll of film you wanted developed and printed contains the same sort of ‘sentimental stuff,’ as you call it.”

The other nodded.

“I guess you better take it somewhere else, then,” Burson quavered, “I’m apt to spoil it in the developing.”

The young fellow, evidently suspecting the truth, put the roll of film back in his pocket, laid the money for his prints down on the counter and left quietly.

When he had gone, Burson sat down behind the counter and buried his face in his hands. In that same position the proprietor found him, when he came in about an hour later. “What are you doing—sleeping?” he asked with surprise; “you’ll never become junior partner that way.”

The words seemed to rouse Burson from his reverie. He jumped up and faced the proprietor. “I don’t want to be junior partner in this hoodood old place,” he rapped out vehemently.

“Why not?” the proprietor demanded in surprise. “Only yesterday you were full of energy and ambition. In fact, you wanted to become my junior partner before you had given any proof of your ability.”

“I’ll tell you why,” Burson answered. “There are too darn many coincidences happening in this place to suit me. One has happened already, and it’s just one too many. I’m not going to wait for the next one. Thank heaven I’m not married, or some little coincidence would come along and take my wife away from me. I’m through, I tell you”—and before the superior could sufficiently recover from his astonishment to make a restraining gesture, Burson had grabbed his hat and had stalked out, leaving his luncheon, a day’s pay, and an astonished proprietor behind him.





FIELD-KITCHENS

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BROWN AND DAWSON

## Photographing on the Firing-Line

ALBERT K. DAWSON

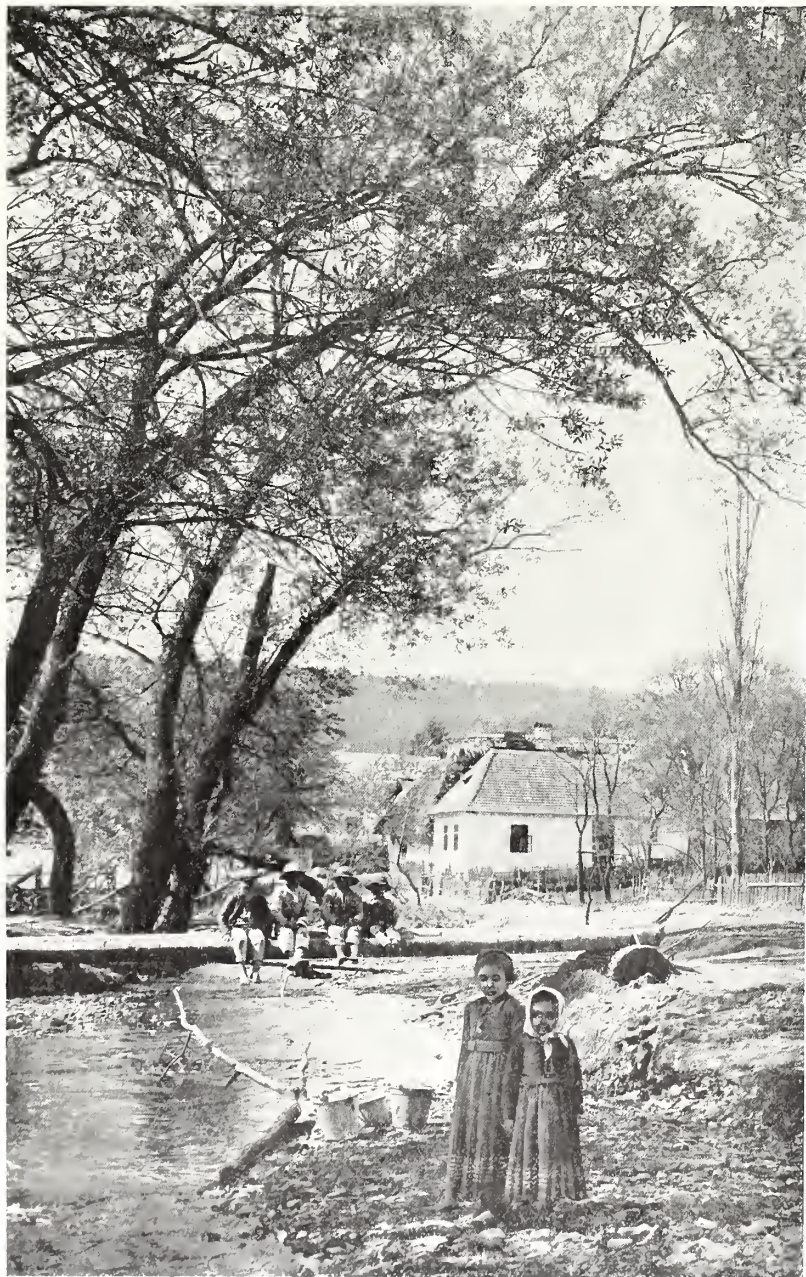
**L**ECKUNG, Granaten!" ("Take cover, shells are coming!") sings out the man on post, and without form, ceremony or standing on the order of their going, officers and men dive into the underground bomb-proof shelters or throw themselves flat in ditches or behind trees. As a rule, they are none too soon, for the enemy's shells which come screaming overhead plunge down with dull explosions all around. They come usually in sixes, with an interval of ten or fifteen seconds between each shell, and until the last one has struck and exploded I never know whether the next one will get me or not. Then a lull may follow, of an hour or so, and I crawl out of my burrow and continue my photographing where it was suddenly interrupted. Or the shelling may continue all day, and I lie there scared and trembling, like a frightened rabbit, and I dare not stick my head out of my hole for fear a piece of shell will carry it away. I was never meant by nature to be a hero.

Such is the daily life of the war-photographer who is making pictures on the front. There is no such thing as making pictures from a place of

safety. No man-built defense would save you from one of the big shells — say 30- or 35-centimeter — should it strike near where you are standing. The underground-shelters I spoke of simply protect from the splinters of shells which burst a little distance away. You must remember that the enemy's guns shoot just as far as our own. When our artillery is close enough to fire on their guns, they are also close enough to shell us should their gunners get the range.

The war-photographer's life is exactly like that of the soldier. He eats from the same kitchen on wheels, he travels and sleeps in the same box-car and the daily risks are the same for both. Naturally, after a few months of service, the camera-man gets hardened to field conditions, so that doing twenty-five or thirty miles on foot becomes just a part of the day's work, and sleeping on the ground is a matter of course. He soon develops a wonderful ability to eat and digest anything in the shape of food be it raw or cooked. On one occasion I sat on a stone beside the road and ate a pound and a quarter of fat bacon — raw, of course — a big onion and a chunk of black bread, and I never enjoyed a meal so





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VILLAGE LIFE, UPPER HUNGARY  
BROWN AND DAWSON

much in my life. That was after marching all day on an empty stomach. My equipment I soon learned to cut down to the bare essentials. One suit of heavy waterproof material with lots of pockets, marching-shoes and leather-leggins, woollen-shirt, soft-felt hat, overcoat and gloves completed my clothing-outfit. Bright colors must be avoided, gray and brown I found to be the most practical.

My photographic outfit was equally simple. A  $3\frac{1}{4} \times 5\frac{1}{2}$  roll-film camera made most of my pho-

and in the automobiles of the staff-officers, as chance might offer. There is no special arrangement made by which the army looks out for and takes care of foreign-photographers. I was glad enough to receive my pass, which allowed me to accompany the army and look out for myself. Moreover, it was much more interesting in this way, for I saw and got pictures of a lot of interesting things which I probably would never have been allowed to go near had I been personally conducted by an officer or a private.



PRZEMYSL AFTER BOMBARDMENT

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BROWN AND DAWSON

tographs, and this I carried on my back in a large case, which held the camera and a stock of films. Plate-cameras I found to be out of the question. My motion-picture camera I had fitted with a felt-lined case made with straps, so I could strap it on the back of my soldier-helper for short trips. On long trips, it was packed in a wagon. Trunks are too cumbersome, so I carried my reserve stock of motion-picture film wrapped up in my blankets, which were in turn placed in a steamer-rug roll of heavy canvas with a handle attached to it. On long marches this baggage went in a wagon. I traveled on foot with the infantry, on horseback with the cavalry-patrols

### Poetic License That Misleads

UNDER the guise of poetic license many an anachronism has found its way into literature and become a fixed popular delusion. Witness the following brilliant flight of rhetoric by a well-known traveler and writer: "A sinuous lake, in whose cerulean waters an island-temple reflected, and whose stillness was broken by, a white replica of a gracefully moving swan."

It is bad enough for careless writers to refer to a copy of a painting or a statue as a replica, which it is not, unless made by the artist, himself; but to consider a mere reflection of an object as a replica is rhapsodic hyperbole.—W. A. F.





A FIELD BEAUTIFUL

A. E. CHURCHILL

## The Tale of a Wonderful Day

A. E. CHURCHILL



**F**XCELLENT articles have appeared from time to time in the photographic magazines, offering experience, suggestion and advice with regard to home-portrait, landscape, architectural, figure and interior photography, to say nothing of numerous valuable writings on the technique of development, printing and various other chemical operations incident to the practice of photography. Still, suggestions on one subject, which, in the humble opinion of an ardent camerist, is very attractive, have been few and far between. That subject is farm-photography! I think it will be conceded that most amateur photographers are residents of large or comparatively large cities. This deduction seems to me a logical one from the fact that the largest number of individuals practising any craft is to be found where the greatest number of people live.

To those among this ever-increasing army who really enjoy picture-making for itself, who are sufficiently interested in the subject to strive for something worth while, I can promise no more pleasurable diversion — nor one offering so

many opportunities to make attractive pictures — than an occasional jaunt to a farm, many of which may be found within a short distance of nearly every city. For the city-dweller — surrounded, as he is, by towering walls and miles and miles of crowded streets, occupied for five or six days a week with the strenuous pursuit of business — I know of no better tonic for jaded nerves, no greater cure for that tired feeling, than to spend a day in the sheer joy of living out in the glowing sunshine, among the chickens, cows, pigs and geese, among the green fields and the exquisite colors of Nature unchanged by the hand of man.

Gather 'round these pages, all you knights of the camera who would meet Nature in her most ingratiating mood, and I will relate to you the adventures of a camerist on a wonderful day spent in photographing on a farm. Though but a short distance from a city of nearly six million people, the farm revealed such a myriad of Nature's exquisite charms that I trust they may inspire in my fellow-camerists a desire to make similar photographic excursions. I feel sure that many spots of equal attraction and interest to





FEEDING THE CHICKENS

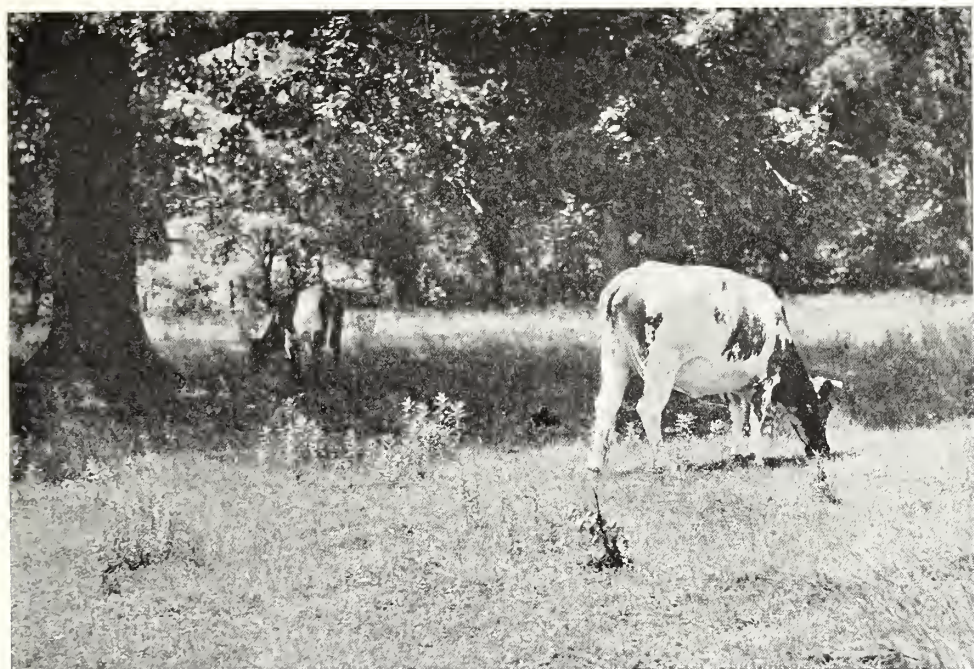
A. E. CHURCHILL

the camerist may be found within convenient distances from the homes of many others situated like myself.

It happened that one glorious morning well toward the middle of September, I looked out of my window and said to the little woman standing by my side, "What a wonderful day for a hike to the farm!" "Let's make a day of it," she replied. Suiting the action to the word, we hastily prepared a luncheon, threw a few needed accessories — a large gingham apron and a sun-bonnet — into a bag, donned our oldest walking-togs, grabbed the photographic impedimenta and off we started for a day in the country.

A short trolley-ride, a ferry across a river, another short ride in a careening trolley-car up a steep winding road to the top of a hill, about fifteen minutes' run along the top and we alighted at the crossing of a country-road. Passing along

this road on our way to the farm, about a quarter of a mile distant, we were greeted by a gorgeous tapestry of Nature's weave and color selection. The chill night-winds of early autumn had touched the sumach as with a brush of brilliant scarlet. Fringing the edges of the fields, little wild asters nodded their blue-capped heads, flanked by patches of yellow golden-rod. A little further on great masses of rich magenta-hue stood out boldly against the green of the fields, and in the distance the soft green and brown tones of the trees — notched here and there with deep purple shadows — shown through the hazy golden sunlight of a September day. What a day for a riot in Antochrome among this kaleidoscope of brilliant colors! With reluctant steps we passed on from this veritable fairyland. Resuming our walk, we arrived presently at the farm, to be greeted by the barking of a big woolly dog, who



AT THE EDGE OF THE WOOD  
THE GRAZING SHEEP

A. E. CHURCHILL



rattled his chain and roared at us with the ferocity of a lion, only to slink into his kennel — tail between legs — when I made a sudden lunge in his direction. How like some people one meets in the journey through life.

Before proceeding with my tale, and before, perhaps, my readers tire of my enthusiasm, I want to say, for the enlightenment of those who have never visited a farm with intent to photograph it, that as a general thing a farm offers more interesting subjects than the average camerist can exhaust in a month. At every turn some new subject presents itself that may be photographed from several different positions, each requiring different composition and lighting effect. The old farmhouse, picturesque in a coat of paint that had once been red or brown, or some color long since made indistinguishable by neglect and the elements, was our first point of attack. The farmer's wife, with her little kiddie and a mongrel-dog, were induced to pose, and they made an interesting group. Within but a few feet of where I made this pleasing bit, the well, with its old oaken bucket, offered itself to the camera. A glint of brilliant sunshine streamed across one corner, and partly in this I posed the willing little lady, who had donned her apron and sunbonnet. For this exposure I allowed plenty of time as the subject was mostly in shadow. I had in mind the old rule so often repeated, "Expose for the shadows, the highlights will take care of themselves." A fifth of a second at F/11 was the exposure given.

From the well, we strolled across to the barnyard, trying to decide what to photograph next, for a number of picturesque subjects appeared in every direction. In the daily routine of every well-regulated farm it is the duty of some one to feed the chickens. We decided that this event would be a most interesting subject for our next picture. Our approach to a large flock of chickens, ducks, turkeys and geese was heralded by a great clucking, gobbling, quacking and cackling. Our entrance into their domain, unannounced, created a general stampede in every direction. Hard by, on one side of the chicken-yard, stood a picturesque old hay-wagon — an accessory which we at once pressed into service. Boosting the lady up on the wagon, I set out in search of some corn and oats with which to entice the unwary fowl to a place where we might photograph them. On scattering the food about, hunger evidently overcame fear, and the entire flock came running from far and near to attend the feast. Having previously arranged the camera with lens pointing almost directly into the sun, and with hood adjusted, I set the shutter at a twenty-fifth of a second and the lens stopped

to F/11. "But," I hear some one say, "I tried that stunt of shooting into the sun, and all I got was halation and a silhouette for an image!" Here, fellow-camerists, is where I let you into the little secret of successful exposure against the light, which for brilliant sparkling results cannot be equalled by any other treatment. Use a hood attached to the front of the lens, and as long a one as it will accommodate without cutting off the corners of the plate. Use backed plates and give a full exposure, for, remember, you are photographing mostly shadows. This advice is old, you will probably say. Yes, it is very old; but have you tried it?

During my photographic rambles, extending over a period of years, I have met photographers by the hundred — amateur and immature — but I believe that I could count on the fingers of one hand those whom I have observed employing a lens-hood. As a matter of fact, about the only camera-man I see nowadays thus equipped is the man with the motion-picture camera. Believe me, when I tell you that he has to know the game, and know it from every angle and under all light-conditions. Try my suggestion sometime, and note the results obtained.

But, I must be on with my tale. After making several exposures from different points, showing various compositions and poses, we sought the shelter of a spreading tree, and there in its cool shadow we partook of the luncheon we had brought. You may rest assured that the invigorating air of the country and the exquisite views that surrounded us on every side enabled us without effort to do ample justice to the repast. Thus refreshed, we set out across the sunlit fields to investigate the possibilities of making some pictures of the spotted and banded cattle that stood grazing lazily in the shade of the trees.

Right here it was where the real outdoor sport of the occasion began. The first thought that impressed itself firmly on the mind of my anxious assistant at our approach to the big soft-eyed animals was that she was either to be eaten alive by the dreadful beasts or else to be trampled into a shapeless mass. She was not quite certain which fate awaited her nor did she care; but she was positive that something horrible was about to happen. By dint of argument, entreaty and explanation, I succeeded finally in getting her to understand that there was a slight difference in habit and temperament between cows and lions, tigers and such ferocious man-eaters. She succumbed ultimately to my powers of persuasion, which considerably relieved a situation that was becoming more and more tense, and bordered on a stampede as the animals circled





IN THE SHADOW OF THE CORN-STACK

A. E. CHURCHILL

about us in friendly curiosity. Once that her fears were set at rest, however, she became a veritable little Spartan. After I had obtained some ears of corn for my companion, she fed the cows from her hand, while I worked away with my camera until the poor things, out of sheer joy at being offered such a treat after their steady diet of grass, fairly beamed their gratitude and followed her about like kittens. I spent most of the afternoon photographing among the cattle, and the numbers of picturesque groupings they assumed as they moved about seemed without end. Indeed, it was a veritable gold-mine for the camerist.

I will say here, for the benefit of those who are curious with regard to the details of exposure, etc., that I confined myself as much as possible to the employment of one shutter-speed, varying

the stop-value from F/11 to F/8 as the afternoon wore on, with consequent diminution of the light. I found that these stops gave me the necessary depth of focus, with sufficient shutter-speed—about one-thirtieth of a second—to arrest the comparatively slow motion of the cattle.

With reference to sensitive material, I regard a fast, backed orthochromatic plate as the ideal one for this class of work. It has sufficient speed and, at the same time, its green-yellow sensitiveness renders it capable of producing soft gradations of tone with the greens of Nature in about the proper key to balance with highlights and shadows. A more highly corrected plate would prove too slow for this purpose, and an uncorrected or blue-sensitive plate would render the greens too dark.



A LARK BUNTING NEST

R. W. DAWSON

Roaming from field to field — each seeming more beautiful than the preceding one — we spent the fleeting hours, until the lengthening shadows of a waning day bade us return to our home in the city. Altogether, it was a day of days, the hours of which sped on only too quickly, and I would recommend heartily the spending such a day with a camera, in such a place, to all who are in search of relief from the seething city. I feel confident that all will return, as I did, with a fresh grip on life that will be a surprise and a delight. Therefore, when summer comes and nature smiles, think of this tale, good reader, and the thought I have tried to convey. Get out your camera from its winter-repose on the shelf, dust it out thoroughly, clean up the lens, see to it that the shutter is in good working-order, invest in some orthochromatic plates and, thus equipped, sally forth, like Haroun-al-Raschid, new worlds to conquer.

### Artificial-Light Exposures

THERE are few people who think of using an exposure-meter in the portrait studio, if, indeed, most portraitists ever use an exposure-meter at all. Long experience with a particular brand of plates under conditions which are otherwise practically unvarying enables the worker to allow for the variations of daylight with a fair degree of accuracy; but when a new artificial light is installed, the question of exposure be-

comes important and the exposure-meter becomes useful. Of course, the best plan is to use the meter as directed by the makers; but even this simple process is too much for some of our artistic friends, so that the following simple plan may be adopted for comparing light-values: Let the exposure-meter darken to its standard tint, in the position in which the sitter's face would be, in an ordinary good light, the exposure being already known. We will assume that five seconds are required to give a good negative. Note the time required for the meter to reach its tint. This gives a ratio between tint and exposure for any other light with the same plate and lens aperture. For example, if we are using an arc-lamp, we may find that half as long again is required to reach the tint. In this case fifty percent more exposure is required to get a negative of quality equal to that of the daylight one. The meter is also of incalculable value to demonstrate how rapidly the light diminishes in value as the sitter is removed farther from the lamp.

*British Journal of Photography.*

✍

"THE shadow of Rembrandt. Could anything be more indicative of quality, and again more inimitable, than that shadow under a broad-brimmed hat, or around a figure, or weirdly filling a room — that shadow that hides and yet reveals, makes mystery and yet suggests truth?"

JOHN C. VAN DYKE.





## EDITORIAL



### Danger in Buying Photo-Material

DOES the reader remember the term "tainted money"? It was when, with virtuous indignation, the directors of some charitable institutions rejected contributions of money from monopolists suspected of having acquired their wealth by overcharging the public for their products. No such fine sense of honor is manifested, or even felt, by persons who purchase articles of merchandise far below legitimate bargain-prices from pawn-brokers or so-called "fences." It is amazing how much photographic material is disposed of by unscrupulous dealers who acquire it with full knowledge that it has been stolen. The mere fact that they pay only a fraction of its actual value, and sell it quickly at very tempting prices, is proof that their activity is an illegitimate one. There exist, in several of our large cities, strongly organized bands of crooks who do a thriving business in stolen merchandise, whose methods form an interesting chapter in criminology. The best known of these methods has already been referred to.

Another but exceedingly clever way is for the "fence" to advertise, let us say, a standard photographic equipment as part of a mass of material some amateur electrician wishes to exchange or sell "low for cash." The person interested only in the camera will "bite" at once and negotiate a purchase, generally at a ridiculously low price. As a matter of fact, the camera was all the advertiser had to sell. The purchaser may have reason to be pleased with his good fortune; but what is his state of mind when a private detective suddenly calls upon him with the request that he surrender his newly acquired bargain? Compensation may be altogether out of the question, in which case the victim will have lost his entire investment. Of one thing he is reasonably sure, however, namely, that there will be no publicity of the affair. That is why we hear so little of the recovery of stolen property from respectable persons, many of whom, one regrets to state, have no scruples against acquiring articles which, in their heart of hearts, they know to have been stolen. But the law allows the pawnbroker to sell an article of value the moment that the four-months' limit has expired, and however pitifully low the price, the heart-broken former owner has no redress under the existing statutes.

There can be little satisfaction in using such a photographic equipment for the production of pictures expressive of pure and noble ideals. Fortunately, there are many careful and high-minded persons who would not acquire a photographic equipment, lens or camera except by thoroughly legitimate methods, i.e., through a dealer of eminent respectability or a private source of absolute reliability.

PHOTO-ERA has frequently pointed out the dangers of acquiring photographic cameras or lenses through dubious sources, whether from motives of economy or otherwise. One trouble is the ease with which an insidious advertisement may be inserted in almost any periodical, although there are some publications — PHOTO-ERA included — that scrutinize every advertising-copy, however small, the publishers having in mind the protection of their readers. The chief offenders in promiscuous publicity are the complacent daily press and certain popular and semi-scientific magazines.

PHOTO-ERA is frequently being requested to print the advertisements of obscure individuals who seek customers for photographic supplies for which they are unwilling to account to the Publisher. The fact that they decline to give references should be sufficient excuse for any discriminating publisher to ignore them, although their advertisements, as has already been stated, occasionally appear in mediums that are usually considered trustworthy.

### The Hobby Par Excellence

ALTHOUGH it is true that many a pictorialist is a born artist, from whose camera masterpieces emerge with almost magical ease, it cannot be denied that a less endowed amateur owes his pictorial success to singleness of purpose — the practice of photography to the exclusion of all other diversions. The man of many accomplishments, dividing, as he does, his enthusiasm and strength among a number of interests, rarely rises above mediocrity, although he seems to satisfy the expectations of his none too exacting friends. If he would see his camera-work adorn the walls of a well-managed salon, he should pay less attention to cards, billiards, sports and other absorbing diversions, and devote his energies to making photography his hobby *par excellence*.



# ADVANCED COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

## Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind, or with thin wood-veneer. Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

## Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

## Awards — Miscellaneous Competition

Closed February 28, 1917

*First Prize:* Fannie T. Cassidy.

*Second Prize:* Robert P. Nute.

*Third Prize:* E. G. Dunning.

*Honorable Mention:* Arthur E. Anderson, Otto W. Bahl, W. B. Baxter, L. O. Bogart, C. C. Boslaw, W. R. Bradford, Dorothy Dobbins, Kenneth Dows, Louis A. Dyar, J. M. Edsall, W. H. French, Jared Gardner, Harriet J. Goodnow, S. H. Gottschlo, A. B. Hargett, F. W. Hill, A. M. Holcomb, Mrs. Howard O. Hoke, Suisai Itow, Carl H. Kattelmann, F. W. Kent, Warren R. Laity, Alexander Murray, George A. Perley, Wilmer S. Richter, H. B. Rudolph, J. H. Saunders, F. B. Schenck, W. Stelcik, Paul E. Truelsch, Elliott Hughes Wendall, William J. Wilson, Ralph W. Young.

Special commendation is due the following workers for meritorious prints: Frank N. Blanchard, L. C. Cook, Emily G. Hewey, A. M. Holcomb, H. C. Sorensen, Arthur H. Travers.

## Subjects for Competition — 1917

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.

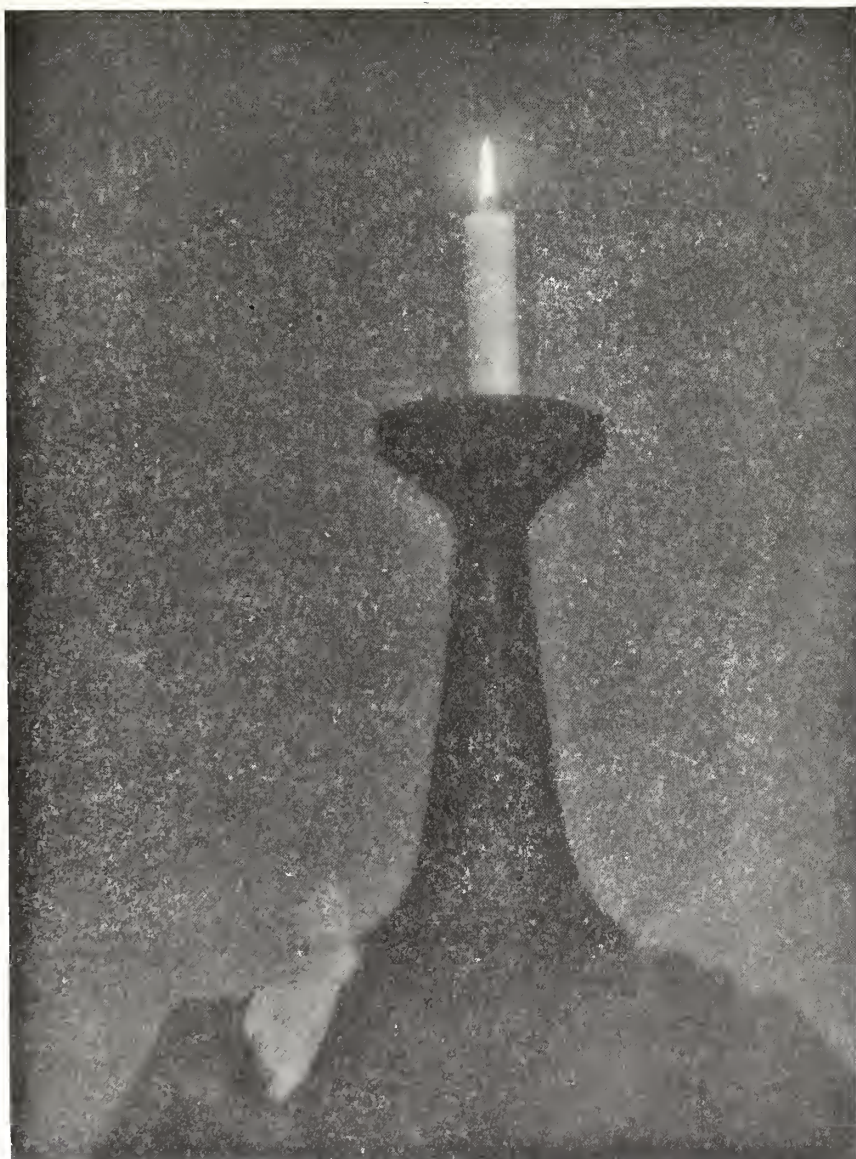


Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

As disappointments in human life go to make character, so do the camerist's pictorial failures, if analyzed by a competent and constructive critic, indicate the way to successful achievement.—W. A. F.





REPENT AT LEISURE  
FANNIE T. CASSIDY  
FIRST PRIZE — MISCELLANEOUS

## Spirit of Spring — Advanced Competition

Closes June 30, 1917

OF all the seasons of the year, Spring is the one that has been most inspiring to the poet and the artist. It symbolizes the joy and freshness of new life — it brings the Easter-time — it is the glad and joyful season, and our pictures of it, to embody the true "spirit" of the season, should be full of light and joyousness. No low-toned, murky or dull effects to interpret the Springtime, but — brightness — sunshine — flowers — youth! Even the showers of April are shot with gleams of sun, and the glistening drops only add to the beauty and brightness. This is the time when one can say:

It is n't raining rain to me,  
It's raining daffodils.  
In every dimpled drop I see  
Wild-flowers on the hills!

A toast unto the happy,  
A fig for him who frets!  
It is n't raining rain to me,  
It's raining violets!

The sudden changes from shower to sun, with the wet roads and sparkling, shimmering foliage, make a tantalizingly beautiful and difficult subject. Not unto us of the camera is it given to portray with any great degree of success the charm of things that scintillate and sparkle. A large part of their fascination is the constant change and movement which must of necessity be lost in our pictures. However, the effect of brilliancy can be captured if a tree in sunlight can be silhouetted against other trees or a hill in shadow. At this time of the year, the foliage is in an ideal condition for photography. Later, it becomes dark and opaque; but when it is first out, it has a light green color and an almost translucent quality that make it photograph much lighter and show a delicacy of texture and detail not to be obtained after it has darkened and become laden with dust and dirt. Before the foliage has fully attained its growth, and the leaves are still small, giving a lacy, open effect to the trees, is the ideal time to photograph public buildings or homes. In winter the bare branches give a rather barren and desolate look to such subjects, and when the branches are in full leaf they are so close and heavy as to hide entirely part of the building. However, in half leaf both of these difficulties are avoided, and the delicate tracery of the new leaves adds to the beauty of the picture, and permits the building to be seen through the open-work pattern — truly, a picture.

One might study Japanese art to great advantage, especially along the line of foreground-studies. It is amazing how perfect a composition and how satisfying a picture these clever people can make with such simple elements as a single drooping branch and a vague horizon-line. The Japanese are a beauty-loving people, and when their cherry-trees are in their wealth of bloom a national holiday is proclaimed, and great and small, rich and poor, spend it in drinking in the wealth of beauty about them. It is hard to imagine commercial America stopping the wheels of her great industries for a day that her people might revel in the beauties of nature. Yet, our country is a dream of loveliness when her fruit-orchards and wild-fruit trees are in magnificent bloom. The peach-blossom is as wonderful a pink as any Japanese cherry, and our humble New England apple-tree, with its pure white and coral pink, leaves nothing to be desired where pure beauty is concerned. When one sees the drooping

catkins of the poplar and willow-trees, or the almost ethereal beauty of the blossoming branches of apple or cherry, one sighs for the decorative instinct; or, perhaps, more truly, the trained ability of the Japanese to enable one to isolate some single graceful branch and make the most of its pictorial possibilities. The drawback to doing that sort of thing photographically is the virtual impossibility to find a sufficiently simple background. One way of ridding one's self of obtrusive detail is to photograph on a day of mist or fog. With these atmospheric conditions, a nearby branch can be made the whole of one's picture, the soft background of mist being entirely unobtrusive.

The very essence of Springtime seems to be embodied, for New England at least, in the blossom-laden apple, plum and cherry trees. If a viewpoint can be found where the delicate whiteness of these trees cuts against the dark background of a hillside or of trees in full leaf, the success of the picture is pretty well assured, as far as the trees being rendered light is concerned; but if the trees in bloom cut against the sky it is not so easy to reproduce their whiteness. The use of a color-screen is almost a necessity to bring out the distinction between blue sky and white blossoms. Without it the snowy tree comes out grimy and dull, and a totally false rendering of values is obtained. However, too heavy a screen should be avoided or the sky will be rendered too deep, with the result that it looks dark and lowering. A screen that requires about three times the normal exposure should give good differentiation without overcorrection. The first delicate blossoms of early Spring are too lowly and retiring to figure very largely in our pictures, but only a little later come the very decorative level branches of the hobble-bush, with their flat clusters of bloom, and the fairylike shad-bush, tall and slim and white, among the darker and larger trees.

When Spring has shaken her mantle over meadow, woodland and roadway, there is no place where one may turn without seeing the makings of a picture. Nature is lavish with material — it is for the man behind the camera to select and combine this material to form a well-composed and unified picture. It may be a temptation to include in our picture the blossom-bordered roadway; the rushing brook, swelled to overflowing by the melting snows and the Spring-rains; and the picturesque lambs "gamboling on the green." Needless to say, a separate picture of each would be a far more satisfactory procedure than a composite of the whole and consequent lack of force.

One aspect of early Spring that one seldom sees represented — but that holds out great possibilities — is the flooded meadow-lands. Very often these have all the beauty of small mountain-lakes, reflecting the varied beauties of the mountains, and the changing sky, ruffled by passing breezes or mirror-like in their quiet. In photographing any sheet of still water, it is sometimes a temptation to expose when the reflections are too perfect and clear. If this is done, one produces not a work of art so much as a puzzle-picture — question — which side up is right-side up? Better to choose a time when

The mountain-shadows on her breast  
Are neither broken nor at rest,  
In pleased uncertainty they lie,  
Like future joys to fancy's eye.

If no vagrant-breeze comes along to produce the desired effect, the regular ripples caused by throwing stones in the water are better than unbroken smoothness, with its accompanying impression of inaction.

The skies of Springtime are peculiarly beautiful, but





FOURTH STREET, CINCINNATI

ROBERT P. NUTE

of the deep blue and pure white variety, most difficult to reproduce satisfactorily. A light color-screen is almost a necessity in such subjects, and it should be borne in mind that the color-screen is of no value unless orthochromatic plates are used. The ordinary plate is "color-blind," and no amount of correction by yellow filters will enable it to separate colors satisfactorily. An orthochromatic plate without a filter gives far better results than an ordinary plate with the screen. But the ideal equipment is an orthochromatic plate and a light-yellow screen. This holds back the blues and gives the desired separation between the white clouds and blossoms and their blue background. It also helps render correctly the delicacy of the new foliage and the yellows of the catkins or golden marsh-marigolds. Exposure and development should be to the end of producing a light and delicate effect, full of sunlight and joyousness — the very "Spirit of Spring."

KATHERINE BINGHAM.

### Focusing

THIS is the season of the year when many amateurs are starting in with a new equipment. Perhaps the old camera was one that used films, and focusing was done by the scale, and the new one has a ground-glass back on which the focusing must be done. It would seem that it was a simple operation, but as a matter of fact

it is not so simple as it seems, and there are many ways in which a little advice might be of service. If one wishes to have everything needle-sharp, and can give unlimited time, then there is little to be said — it is simply a matter of obtaining a sharp focus on the middle distance, stopping down to  $F/64$  or  $F/128$ , and giving a prolonged exposure. However, for artistic effect, it is not desirable to have all parts of a picture equally sharp, and it is often impossible to give as long an exposure as the small stops demand. For pictorial work, then, more care is required in obtaining the proper focus. The laws of aerial perspective require that the distance should be less clearly defined than the middle distance and foreground. In looking at a tree on a distant hill we do not see each leaf and branch clearly defined as in a similar tree close at hand. We know by its general shape and appearance whether it is an elm or a maple; but for any further knowledge, at a distance, we must call on our memory or imagination, for our eyes do not give it to us.

We are not reproducing nature as we see it if we make distant objects just as clear and sharp as is the foreground. Our lens takes care of linear perspective for us — we could not if we would make our distant objects of the same size as nearby ones, but the matter of clearness is largely in our hands. An excellent way to do is to focus on some chosen "center of interest"



A HOME-SCENE

E. G. DUNNING

with the lens wide open, and then see if by tipping the swing-back you can bring the foreground into focus. If not, it will be necessary to use a smaller stop. A good rule to follow is to use the largest stop whenever that will give the requisite detail in foreground and middle distance. For the foreground to be out of focus is a flagrant falsification of "things as they are," or as we see them.

In adjusting the focus, a good way is to select some nearby object not in the immediate foreground, but where you wish interest to center, and, keeping the eye on this, rock the lens back and forth until you are sure the best definition is found for this point, then, by other means, sharpen what it is desirable to have sharp. In portrait-work the eyes are the thing on which sharp focus should be obtained, as they make the life of the face. It is sometimes recommended that a magnifying-glass be used for the focusing, but this is entirely unnecessary unless fine copying or line-work is to be done. If a copy is to be made, and it proves hard to focus, a bit of newspaper or other printed matter fastened to it will give something clear on which to obtain the sharp image. Needle-sharpness is not amiss when copying drawings and things of the "record" type, but in pictorial work it is anathema. Artistic or "selective" focusing is the foundation of artistic work.

KATHERINE BINGHAM.

### Sagging Bellows

WHEN using an old camera at a more than ordinary extension it is well to make quite sure that the bellows, by sagging in the middle, are not cutting off any part of the picture. It is easily overlooked unless specially watched for, as the upper edge of the focusing screen, which is the part affected, is often rather dark. The bellows can be propped up temporarily from underneath with a match-box, or in some similar way, if they are only used very occasionally with such an extension. If it is frequently employed, then they ought to be stiffened, which can be done by extending them fully, and then brushing over the inside of the camera with strong glue and allowing this to get quite dry before closing them up at all.—*Photography*.



### The Doings of Clubs and Societies

ADVANCE-NOTICES of the activities of progressive photographic clubs and societies will be printed in *PHOTO-ERA*, provided such notices are received in time.

To facilitate this, secretaries should send that information to *PHOTO-ERA* at least as soon as it is sent to their printers. Often it reaches *PHOTO-ERA* too late to be of any value to the readers of the magazine.





# THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY



## Partly Exposed Spools of Films

It often happens that when two or three negatives on a spool of film are exposed these are wanted for development before the rest of the film is completed. The worker is then faced with two alternatives: wasting the remaining unexposed sections, or exposing them upon indifferent subjects, which often amounts to the same thing. The present writer has very frequently separated the exposed and unexposed sections of a strip of film very simply in the following manner: The last exposed number showing through the indicator at the back of the camera is noted, and the spool wound off into the exposed chamber in the usual way. The camera is then unloaded, and the spool taken into the darkroom and unwound carefully—keeping the film and black paper very carefully in correct position. When the last exposed film is reached, its outer edge—as indicated by the white lines on the black paper—is cut through. The black paper must not be cut, as this will be needed to fasten the unexposed end of the film, as in the first instance. The “exposed” film is then put carefully away for development, and the unexposed section is fastened to its black paper by a strip of adhesive tape the exact width of the spool. The film is then very carefully rewound on its spool, and this may then be wound into position in the usual way, the first numbers, containing the exposures that have been removed, being ignored. The above operation, though seemingly intricate, is really very simple, and can be performed almost as quickly as it takes to read the words. The only point that needs care is to make sure that the film—when being refastened—is exactly true on the black paper; if this is not the case, there will be trouble in the winding. These points are of especial value to roll-film workers, who, attracted by its many advantages, often find that a complete spool is not required at once, and that the two or three negatives that have been exposed are needed to print as soon as possible. If the above points are noted, roll-film can compete on equal ground in this respect with glass-plates, and it certainly demands consideration on the score of economy.—*Amateur Photographer.*

## A Focusing Screen Aid to Composition

To be correct according to the canons of art a picture should be so arranged that the principal objects are neither in the corners nor in the center. To assist the photographer in forming his picture it is a good plan to mark the focusing-screen with a coarse black lead-pencil. First draw horizontal and vertical lines at right angles, intersecting in the middle of the screen. Then sketch an ellipse, or, as it is often termed, an oval, just large enough to go in the oblong formed by the sides of the screen. When focusing see that the corners, outside the oval, are not occupied by any important detail, and look out for the cross lines in the middle, taking care that none of the principal objects fall upon these lines.—*Amateur Photographer.*

## A Good Method To Harden Film

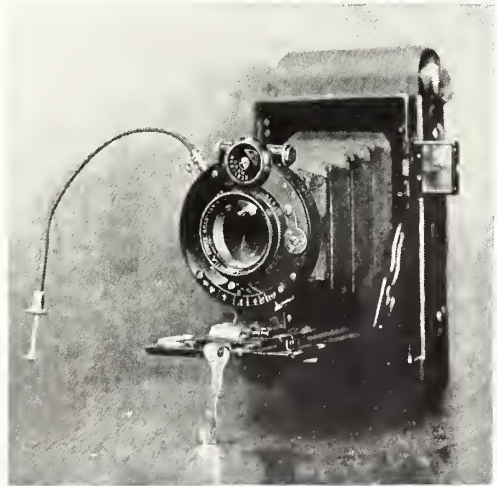
ONE of the best methods to harden a negative-film so that it will withstand the wear and tear of a long run of prints, is to soak it in a bath made of alum, 4

ounces; tannic acid, 120 grains; water, 32 ounces. The negatives should not be left in this solution for longer than four minutes; otherwise it may become so hard that the film will crack and split at the edges. The solution will keep and can be used repeatedly.

*The Professional Photographer.*

## An Unusual Equipment

SOMETHING of a novelty in cameras is owned by a Kansas City, Mo., amateur photographer. It is a folding pocket-box, size  $2\frac{1}{4} \times 3\frac{1}{4}$  inches, fitted with a 4-inch Cooke anastigmat lens working at the unusually fast aperture of F/3.5. A compound shutter was found which would receive it, and the proper separation was made by a washer. New diaphragm-markings were calibrated on it, and the Premo roll-film box had to be



FOLDING PREMO 2 WITH COOKE F/3.5 LENS

deepened to accommodate the large lens. The assembling was done by the owner, Dr. Maclay Lyon. At full aperture of F/3.5, unusual depth is obtained when focused at infinity. The lens is guaranteed to cover fully a plate  $3\frac{1}{4} \times 3\frac{1}{4}$  inches.

Owing to the great expense for alterations connected with special equipments as described above, manufacturers—such as the Bausch and Lomb Optical Company, C. P. Goerz American Optical Company and others who make an F/3.5 anastigmat—do not advertise or recommend these special equipments to the general public. However, any advanced amateur who knows *exactly* what he wants, and who is willing to *pay the price*, can usually obtain the desired equipment. Many amateurs have had F/3.5 lenses fitted to their high-grade vest-pocket and coat-pocket cameras.

These equipments, in the hands of those knowing how to use them, are efficient and satisfactory. Exposures may be made under conditions which would render a slower lens almost useless without a time exposure.



# BEGINNERS' COMPETITION



Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.

## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before PHOTO-ERA awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. ***Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. ***Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.***

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff corrugated board, not the flexible kind, or with thin wood-veneer.*** Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed February 28, 1917

*First Prize:* Elizabeth B. Wotkyns.

*Second Prize:* Charles L. Snyder.

*Third Prize:* J. Louis Cunningham.

*Honorable Mention:* LeRoy Van Anden, E. W. Congdon, George W. French, Ross T. Hill, Ikko Kurachi, Louis R. Murray, Merle L. Mesmer, Earl A. Newhall, Guy E. Osborne, Henry L. Osborn, E. M. Pratt, Mrs. H. G. Reed, George P. Russell, Mason H. Seabury, M. C. Still, R. B. Unsworth.

Special commendation is due the following workers for meritorious prints: A. F. Brewer, Kenneth D. Smith.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.



A MUDDY, lifeless bromide print can be considerably improved by one application of the chromium intensifier. This treatment adds to the depth of the print and turns the color into a fine rich black. The solution is made by dissolving 100 grains of potassium bichromate in 10 ounces of water and then adding 3½ drams of hydrochloric acid. After bleaching, the print should be washed for five minutes, exposed to daylight or strong artificial light, and redeveloped with Dolmi.

*The Professional Photographer.*



## New Equipment

EACH year, as spring comes around again, one has visions of countless new recruits in the army of amateur-photographers, starting out to "shoot up" the surrounding territory. In this line of effort, as in others, there is no universal type of novice. One will go into it head-first, snapping everything in sight — taking eight or ten pictures on a roll supposed to furnish a half dozen exposures, and then turning over the exposed film to the photo-finishers — finally attributing the poor results to faulty developing. Another type of amateur will go to the other extreme. He will be so doubtful as to what he can take, and what he must avoid, that he seldom takes anything. Both these types as a rule soon decide "there is nothing in it," and lay the camera on the shelf, or take it to the second-hand dealer. However, there is another kind of person who goes to work intelligently to understand the intricacies of his instrument; to find out the subjects that will make good pictures, and to know the reasons of his success or failure in reproducing them. This is the type of amateur whose enthusiasm grows, and whose ambition soon carries him beyond the amateur ranks.

On entering any new occupation it is never wise to "go it blind." A little time put into the examination of one's apparatus — enabling one to understand its working, and the reasons for the various manipulations — will prove a good investment when one comes to the actual picture making. Before putting a film in the camera, remove the back and watch what happens when the different levers and slides are operated. It will be seen that when the indicator is set on T (time), one pressure of the bulb or other shutter release opens the shutter, which remains open until a second pressure closes it. Leave the shutter open while you observe the different sized openings brought into position by changing the indicator on the front of the camera — or, in the box cameras, by pulling up the

little slide at the top in front. It will be understood readily that the smaller this opening is, the less light is admitted and passed on to the film. Therefore, it is obvious that when these smaller openings are used longer time is needed to produce an equivalent exposure. The advantage gained by using the smaller apertures is an increase of sharpness due to excluding the more divergent rays entering through the margins of the lens. This gives greater depth of focus — that is, the near and distant objects are more nearly in focus at the same time. An interesting way of seeing

just what happens is to observe the effects on a focusing-screen. In a plate camera this is the purpose of the ground-glass back. However, in film-cameras there is no such provision. One can be improvised by stretching a fine-grained tissue-paper across where the film would come. A strip, the width of the film, can be adjusted to register very satisfactorily in most types of cameras. By pointing the lens toward some strongly lighted object, and excluding light which might strike the back of the tissue, you can see the effect of stops and focus very satisfactorily. If the camera is of the folding type, you can discover by moving the front backward and forward what happens if you fail to judge your distance correctly, and set it at ten feet when it should be eight or fifteen. Incidentally, you will probably sigh for the day when the beautiful colorings seen on the focusing-

screen may be reproduced by photography.

When you have made yourself familiar with these manipulations and their results, remove the focusing-screen and, by another pressure on bulb or lever, close the shutter. By trial you will find that when the indicator is set on B (bulb) the shutter remains open while pressure is maintained, closing when it is removed. This makes it possible to give a very short time exposure for objects in heavy shadow outdoors or well-lighted subject indoors. When using either bulb or time exposure the camera should be placed on some firm support. If the shutter has various instantaneous exposures, try

LITTLE LADY LAUGHTER

ELIZABETH B. WOTKYNs

FIRST PRIZE — BEGINNERS' CONTEST



them and see what the variation is. For ordinary snapshots, a twenty-fifth of a second is a good speed. When you have mastered the workings of the shutter — and other details — a film may be inserted and an exposure made with a more intelligent understanding of what is happening when different adjustments are made.

In order to "keep tabs" on one's results and get the full pleasure from the work, one should do one's own developing and printing. With modern apparatus it is not difficult, and when one has control over all steps in the production of one's pictures, the causes of failure are more apparent and the remedies more easily administered. If a careful record of exposures is kept it is a great aid to locate trouble, and, if one has an autographic Kodak, it is very easy to "Write it on the film at the time." A word as to light conditions, stop and exposure written on the film will be a great help. If the film is exceptionally good, you know how it was obtained — if it is a failure, you can judge where the trouble lay and avoid it next time. To learn by one's failures is to take the road to final success.

KATHERINE BINGHAM.

### Eastman Portrait Films in Small Sizes

You can always chase the devil around the stump, if you know how. Eastman Portrait Films make heavenly pictures, but they come only in sizes from 5 x 7 inches to 11 x 14 inches. These large sizes cut down to the standard small dimensions with almost no waste of film — the 5 x 7 to  $2\frac{1}{4}$  x  $3\frac{1}{4}$ ; the  $6\frac{1}{2}$  x  $8\frac{1}{2}$  to exactly four pieces,  $3\frac{1}{4}$  x  $4\frac{1}{4}$ ; the 8 x 10 to 4 x 5 and, last but not least, the 11 x 14 cuts to eight postcard-size and a half-inch strip. So much for the economy.

If you have an ordinary print-cutter or trimmer with the inches from the knife-edge marked so that you can see them by the darkroom-light, the rest is easy. The films come packed alternately with thin black paper. Remove one film from the package emulsion-side down with the black paper on the upper or "glass" side. The paper protects the film from the darkroom-light, which can be quite near and strong for the actual cutting-process. Cut the black paper with, and at the same time as, the film. The black paper goes into the plateholder with the film and in all subsequent operations. It acts as a very important indicator of which side is the back. Suppose your cutter has only a five-inch blade and you want  $3\frac{1}{4}$  x  $4\frac{1}{4}$  from a  $6\frac{1}{2}$  x  $8\frac{1}{2}$ . Lay the  $8\frac{1}{2}$ -inch edge along the ruler at right angles to the knife, so that you cut off exactly  $4\frac{1}{4}$  inches. Cut right into the film well over  $3\frac{1}{4}$  inches, but not to the end of the knife; then reverse the entire film and cut from the opposite long side. Now cut the resulting strips in two again, and the trick is done. The next step, loading the holders without proper thought and tools, may be bad for the soul.

A glass plate or old negative goes under each film in the holder. It is easy as "pie" to get one end of the film into the holder, but the other end may refuse to go in, particularly in the Graflex type of rigid holders. Here is where the tools come in handy. Instead of poking the recalcitrant film in with the moist finger, use an open pair of sharp-pointed shears, or you can worry it in with a pen-knife, the same being applied not more than a sixteenth of an inch from the edge of the film.

If you like risky, "nervy" stunts, you can develop the films still with the inevitable black paper, back to back in a plate-tank, using alternate grooves. If you are conservative, and like to play safe, you can develop them, black paper and all, in the regular Premo film-tank of the same or preferably next size larger. Fix and partly wash in the rack in which they were devel-

oped. A short final wash without the black paper, and there you are! — E. B. WHITING.

### A Possible Source of Fog

It is important that there should be no bright metal about the inside of the mount of a lens, or it will be reflected and re-reflected, and will cause the negatives to be veiled. If such results are obtained and the cause is not found quickly, it is well to look to the edges of the metal blades of the iris diaphragm, or of the diaphragm shutter. If these have worn bright, they should be blackened again; but this is a job for the maker.—*Photography*.

### Soft Negatives

As the photographer gets more and more experienced, he gradually realizes that the best prints are not to be obtained from bright, sparkling negatives, but from soft, delicate ones. Such soft negatives are not foggy. If they are to give perfect prints, all the deposit upon them must have printing value, and none of it be a mere fog or veil over the whole surface. The negative which looks pretty, which has that clearness which is so admirable in a lantern-slide, is invariably disappointing as a printer; because that prettiness stands for underexposure and overdevelopment. One should aim at getting negatives which are sufficiently vigorous to give prints with a full range of gradation, but which have no parts either perfectly clear or so opaque as to give blank white in the print.—*Photography*.

### Developing Film-Packs in Heaven

At least that is the way it feels, and the expense for a safe and sane outfit is ridiculously low compared to the cost of films and paper and perspiration. Developing more than one individual film in a tray is all right if you like it, but you are working on scratch, so to speak.

Here is the point, if you want to avoid perspiration and philosophy. Get a developing-rack to hold your films which is the next size larger than the one made for that particular size of film.

In the early days of my own photographic career I used to take a  $3\frac{1}{4}$  x  $4\frac{1}{4}$  film pack and a  $3\frac{1}{4}$  x  $4\frac{1}{4}$  film pack developing-tank into a stuffy darkroom and, at an unheard-of temperature, try to persuade the pesky things to get, one by one, into the tank-rack. They went in, of course they went in. They were made to go in and that was the trouble. False economy went in with them. For several years I have been using a 4 x 5 developing-tank rack. An eel slipping down a hen's throat does not begin to express the ease with which those  $3\frac{1}{4}$  x  $4\frac{1}{4}$  films slip into the larger size rack. In comparison to the "regular" size, the films simply drop into place.

And now, as the lawyers would say, for the argument: A tank properly treated lasts a lifetime; therefore, first cost is negligible. The larger tank need cost no more for developer. Use more water and give them more time. You have saved that time in loading the tank, so the two times cancel out. A weaker developer and longer time is better for snapshots, anyhow. And, besides, you can trade in your small tank for something. Last, but not least, your chances for heaven will be much better with the larger tank.—E. B. WHITING.

### Small Negatives and Enlargements

ONE of the directions in which economies may be effected is the use of smaller sizes, making the prints in the enlarging-lantern. It will be found, however, that





THE HERMIT RIM ROAD

CHARLES L. SNYDER

it is only certain work which can be handled satisfactorily in this way. In portraiture, we do not think that anything would be gained by using quarter-plates and making the cabinet prints in the enlarger. Such a method would preclude the possibility of using gaslight papers for an occasional thin negative, and we believe that what was saved in the cost of plates would be lost in the time spent in making the prints, in the extra care needed in the retouching of the negative, and a certain quantity of necessary work on the prints. But for certain outdoor-work, smaller plates may be used very satisfactorily if the camera is an instrument of precision and is fitted with a really fine modern lens. If the negative is to be quarter-plate ( $3\frac{1}{4} \times 4\frac{1}{4}$  inches) and the enlarged print  $10 \times 8$  or  $12 \times 10$ , it is evident that the most perfect definition will be required in the negative, as the enlarged print must be equal to a direct-contact print from a full-sized negative. Of course, the optical advantages lie with the small camera and lens, and the shorter exposures possible should give a smaller proportion of "moves" in group-work. We remember to have seen some four or five years ago a fine set of prints, sepia-toned bromides, of a country-house, ponds, etc., all enlarged to  $10 \times 8$  from small negatives, and no one could have told that they were not direct sepia prints. The use of a small camera for such outdoor-work was suggested many years ago by

Mr. Drinkwater, and the instrument he advised was an N. & G. Special B. But any camera may be used, provided it possesses, as we have already hinted, accurate and rigid adjustments and a lens giving critical definition.—*The British Journal of Photography*.

#### Our "Miscellaneous" Quarterly Competition

MANY workers occasionally produce pictures of exceptional merit and interest which do not seem to fit any classified subject in the PHOTO-ERA monthly competitions as announced from month to month. Such pictures may be entered in the competition for miscellaneous subjects to be held quarterly, beginning with February, 1917.

The rules, including the award of prizes, that govern the regular PHOTO-ERA competitions for advanced workers will apply to these quarterly competitions. It should be borne in mind that pictures offered elsewhere and rejected may not be suitable.



#### In the Darkroom

"DEVELOP — nothing but develop, from morning till night!"

"How long have you been at it?"

"I begin to-morrow."—*Adapted*.



## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**J. V. H.—The change from a rectilinear lens to an anastigmat requires close attention.** You say that your new roll-film camera, fitted with B. & L. Zeiss Tessar II B F/6.3 lens is causing you more trouble than your old box camera ever did, and that you cannot obtain sharp pictures. Since your new equipment has no ground-glass, it is of great importance that you estimate distances correctly. If you have a good idea of distance, and the trouble still continues, it may be due to the fact that the focusing-scale is not properly adjusted. An anastigmat lens must be focused very carefully, as a slight movement forward or backward renders the picture sharp or out of focus. We would suggest that you use stop F/8 and a shutter-speed of about  $\frac{1}{20}$  of a second, and make several pictures without altering the stop or speed. With the lens and shutter set as indicated, you should obtain clear sharp pictures from about twenty feet in front of the camera to infinity. Should this test not prove satisfactory, we would suggest that you take the camera to a competent camera repair-man and have him check up the focusing-scale.

**B. H. W.—An F/4.5 lens stopped down to F/6.3 is identical in speed to another lens that works at F/6.3.** The speed in this case is not a matter of the construction of the lens, but the size of the stop employed.

**L. J. E.—Long-focus lenses generally improve the perspective;** at the same time, they narrow the angle of the picture to such an extent that the field of view is reduced. The entire matter depends upon the work in hand. For pictorial photography, it is better to have a lens of fairly long focus than one that is too short.

**O. C. H.—A 4-inch lens on a  $2\frac{1}{2} \times 3\frac{1}{2}$  plate is virtually equal to an 8-inch lens on  $5 \times 7$  plate.** In both cases it is the angle included by the lens which is the deciding factor. The size of the plate has nothing to do with it. Should you change the focal length of the lens in question from a 4-inch to a 6-inch and from an 8-inch to a 9-inch the matter would still remain relatively the same.

**W. B. C.—If there is depth of focus in a small negative, it will appear in the enlargement;** if in the small negative there is no depth of focus, no amount of enlarging will put it there. It must be remembered that enlarging cannot put into a picture that which is not in the negative. With this in mind it is advisable to obtain depth of focus at the time the picture is made.

**F. W. H.—There are some F/4.5 lenses which are convertible;** however, this does not mean that they retain this speed; take the Goerz Dogmar Lens as an example; this lens works at a maximum aperture of F/4.5. When one of the combinations is removed, it becomes necessary to stop down to about F/32 to obtain definition equal to the definition obtained with the complete lens. From this, you may see that the speed of a lens is greatly reduced, and that it is not suitable for speed-photography, when the single com-

binations are used. However, for landscape-photography, the lens does admirable work.

**R. W. Y.—The expressions "quarter plate" and "half plate" refer to the size of plates, paper and mounts.** These terms are virtually obsolete in the United States, but they are still used extensively in England and the English Colonies. They are based on the assumption that a whole plate is  $6\frac{1}{2} \times 8\frac{1}{2}$  inches; half this plate is considered to be  $4\frac{1}{2} \times 6\frac{1}{2}$  or  $4\frac{1}{4} \times 5\frac{1}{2}$  in the United States, but in England the half plate is understood to be  $4\frac{3}{4} \times 6\frac{1}{2}$  inches; a quarter of the whole plate is  $3\frac{1}{4} \times 4\frac{1}{4}$  inches and is a standard size throughout the world. It is well for the reader of English photographic literature to keep "quarter plate" and "half plate" clearly in mind to avoid confusion when corresponding with English firms. The whole plate used to be still further divided into sixth and even ninth plate, but these terms have been suspended by the more accurate modern method of designating the size by actual dimensions.

**P. T. H.—The brilliancy of blue-prints may be improved by the following method,** though the shadows have always a tendency to block up. Expose a trifle longer than usual, and before putting in water, immerse and leave for about five minutes in a bath of strong ammonia one part to one hundred parts of water. Wash thoroughly — then develop the weak gray print in a solution of citric acid five parts to one hundred parts water. The prints change from gray to green, then to blue. Wash well.

**C. P.—Brush development of gaslight prints is not difficult.** The print to be developed is first thoroughly wet in water, then placed on a sheet of glass supported at an angle in a developing-tray and the surface water blotted off. The usual developer is diluted with about one-fourth its bulk of glycerine and applied with a rather wide rubber-set brush. It is possible to produce very pretty sketchy effects by this method. A smaller brush dipped in stronger developer may be used to bring out detail, or dipped in glycerine to hold back certain parts.

**V. B. E.—It is possible to stain negatives for the improvement of printing quality.** If a plate is flat and lacking in detail it may be strengthened by immersion in a solution of gray-blue aniline. The color is absorbed in proportion to the amount of silver reduced, and the printing detail is greatly improved.

**J. H. R.—Sodium sulphantimoniate is the chemical designation of Shlippe's salt.** It is composed of rather large reddish-yellow tetrahedral crystals that are soluble in water. It is used as a redeveloping-agent for sulphide-toning and for intensifying negatives after mercurial bleaching. It is regularly listed in *Merek's* chemical catalog.

**C. H. W.—Long bellows are required to copy objects natural size or nearly so.** Often very satisfactory copies are made by using so-called portrait-attachments and copying-lenses in connection with the lens supplied with the camera. Technically, the best results are obtained by using a plate-camera equipped with a double- or triple-extension bellows and ground-glass for focusing.

**P. C. O.—On a fishing-trip, films are preferable to the use of plates** unless accurate scientific photography is to be attempted. The almost exclusive use of films throughout the war-zone is proof enough that satisfactory results are obtained. In your case, weight is an important item; and likewise the danger of breakage must be considered. A small vest-pocket roll-film camera equipped with an anastigmat lens should meet your requirements efficiently. The best negatives may be enlarged to  $5 \times 7$  or even  $8 \times 10$ .





## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

H. C. S.—The picture of the baby is interesting technically. As a portrait of a child, it also has merit. The flesh-tones are well rendered, and there is softness and gradation in the white dress. It is better than most pictures of this kind. What a pity that the background is marred by an open-back chair, which, being one of clearly defined design, does not add to the intended artistic effect. The left hand of the baby is clearly indicated, but the right is blurred, owing to motion. The general effect, however, is very pleasing.

center of the picture-area, and the left devoted to empty space. Your subject is a difficult one. We would suggest that you photograph an airplane against a sky that is filled with clouds, and thus, perhaps, pictorially interesting.

A. M. H.—Your "Approach of Evening" landscape suffers for a lack of interest. It is very commonplace, and there appears to be no central point of interest, except, perhaps, the barns in the middle foreground. If this picture had been taken at a different time of the day, and with clouds in the sky, it might have been well worth doing.

K. S. O.—"Afternoon-Tea," representing two young women having tea together is a happy idea, but has been poorly carried out. The hair of the figures, as well as their skirts, is represented by deep black without detail. Their shirtheists are virtually glaring white, as is also the doily on the table. The wall-paper, forming the background, is a very lively one, owing to the figure-design being repeated sixteen times. It is not very restful. A quiet background and a longer exposure, if possible, would have yielded a more harmonious result.



FAST IN THE ICE

J. LOUIS CUNNINGHAM

THIRD PRIZE — BEGINNERS' CONTEST

A. F. B.—Your title, "The Wee House on the Hill," is more attractive than the picture, which latter does not show the little Scottish house as an artistic object. The background of trees is very black, as well as all the shadows in this print. The house itself is very white, the whole effect being one of severe underexposure. The sky is blank, but could have been interesting with the addition of a few clouds.

L. P.—Your print called "Modern Birds of the Air, at Rest and in Flight," is an ambitious title, but the idea is carried out very inadequately. The airplane is exactly in the center of the picture, up against the sky, and the one on the ground is not remarkable for sharp definition. There appears to be no attempt at pictorial arrangements, both airplanes being at the right of the

H. K.—Your arrangement of a vase filled with pussy-willows, near which a cat is posing, has little artistic merit because of great underexposure. The subject is attractive, but not well executed. The vase is almost jet black and is resting upon a perfectly white vase relieved against a perfectly white background. The shadows cast by the bunch of pussy-willows detract rather than add to the attempted pictorial arrangement. The cat, too, shows by its contrast the lack of proper exposure. Color-values are lacking in the entire picture.

E. H.—Your pictures of roses, and the interior of a stable showing a row of cows, shows a lack of exposure; hence, the undue contrast of dark and light. Your prints illustrate good pictorial subjects, but the lack of proper technical management has resulted unfavorably.

# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

\*These figures must be increased up to five times if the light is inclined to be yellow or red.

†Latitude 60° N. multiply by 3;

55° × 2; 52° × 2; 30° ×  $\frac{3}{4}$ .

‡Latitude 60° N. multiply by 2;

55° × 2; 52° ×  $\frac{1}{2}$ ; 30° ×  $\frac{3}{4}$ .

§Latitude 60° N. multiply by  $\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

¶Latitude 60° N. multiply by  $\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

## MONTH AND WEATHER

| HOUR                    | JAN.,<br>Nov., Dec. † |          |                |      |           | FEB., OCT.<br>‡ |          |                |      |           | MAR., APR.,<br>AUG., SEPT. § |          |                |      |           | MAY, JUNE,<br>JULY ¶ |          |                |      |           |
|-------------------------|-----------------------|----------|----------------|------|-----------|-----------------|----------|----------------|------|-----------|------------------------------|----------|----------------|------|-----------|----------------------|----------|----------------|------|-----------|
|                         | Bright Sun            | Hazy Sun | Diffused Light | Dull | Very Dull | Bright Sun      | Hazy Sun | Diffused Light | Dull | Very Dull | Bright Sun                   | Hazy Sun | Diffused Light | Dull | Very Dull | Bright Sun           | Hazy Sun | Diffused Light | Dull | Very Dull |
|                         | 3 2                   | 1 6      | 1 8            | 1 4  | 1 2       | 3 2             | 1 6      | 1 8            | 1 4  | 1 2       | 5 0                          | 2 5      | 1 12           | 1 6  | 1 3       | 6 0                  | 3 0      | 1 15           | 1 8  | 1 4       |
| 11 A.M. to 1 P.M.       | 3 2                   | 1 6      | 1 8            | 1 4  | 1 2       | 3 2             | 1 6      | 1 8            | 1 4  | 1 2       | 5 0                          | 2 5      | 1 12           | 1 6  | 1 3       | 6 0                  | 3 0      | 1 15           | 1 8  | 1 4       |
| 10-11 A.M. and 1-2 P.M. | 2 5                   | 1 12     | 1 6            | 1 3  | 3 2       | 2 5             | 1 12     | 1 6            | 1 3  | 3 2       | 4 0                          | 2 0      | 1 10           | 1 5  | 1 2       | 6 0                  | 3 0      | 1 15           | 1 8  | 1 4       |
| 9-10 A.M. and 2-3 P.M.  | 1 12                  | 1 6      | 1 3            | 2 3  | 1 1       | 1 6             | 1 8      | 1 4            | 1 2  | 1 1       | 4 0                          | 2 0      | 1 10           | 1 5  | 1 2       | 5 0                  | 2 5      | 1 12           | 1 6  | 1 3       |
| 8-9 A.M. and 3-4 P.M.   |                       |          |                |      |           | 1 3             | 1 2      | 1 1            | 1 12 | 3 1       | 3 0                          | 1 15     | 1 8            | 1 3  | 3 2       | 3 0                  | 1 15     | 1 8            | 1 4  | 1 2       |
| 7-8 A.M. and 4-5 P.M.   |                       |          |                |      |           |                 |          |                |      |           | 2 0                          | 1 10     | 1 5            | 1 2  | 3 4       | 2 0                  | 1 10     | 1 5            | 1 3  | 3 3       |
| 6-7 A.M. and 5-6 P.M.   |                       |          |                |      |           |                 |          |                |      |           | 1 15                         | 1 8      | 1 3            | 3 4  | 1 1       | 1 15                 | 1 8      | 1 4            | 1 2  | 3 4       |
| 5-6 A.M. and 6-7 P.M.   |                       |          |                |      |           |                 |          |                |      |           |                              |          |                |      |           | 1 10                 | 1 5      | 1 3            | 2 3  | 1 12      |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks, ravines, to glades and under the trees. Wood- interiors not open to the sky. 48 Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.



# For Perpetual Reference

For other stops multiply by the number  
in the third column

## Example

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

|           |       |       |
|-----------|-------|-------|
| U. S. 1   | F/4   | × 1/4 |
| U. S. 2   | F/5.6 | × 1/2 |
| U. S. 2.4 | F/6.3 | × 5/8 |
| U. S. 3   | F/7   | × 3/4 |
| U. S. 8   | F/11  | × 2   |
| U. S. 16  | F/16  | × 4   |
| U. S. 32  | F/22  | × 8   |
| U. S. 64  | F/32  | × 16  |

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 P.M., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply  $1/16 \times 4 = 1/4$ . Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class.  $1/16 \times 1/2 = 1/32$ . Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
Ansco Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Imperial Special Sensitive  
Seed Gilt Edge 30  
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
Barnet Red Seal  
Cramer Instantaneous Iso.  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
American  
Ansco Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film  
Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B  
Class 2, P. E. 78, Wy. 120, Wa.  
Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome



## OUR ILLUSTRATIONS

WILFRED A. FRENCH



BEING in need of a suitable cover-subject for May, the concluding spring-month, the Publisher examined his supply of prints but found nothing to compare with Duehrkoop's "Rhododendrons," which, however, had been published four years ago as an inside illustration. Despite this circumstance, it is now offered for the purpose of catching the eye of the new-comers and strangers, who will find satisfaction in this delightful composition and exemplification of grace and beauty. Attention is invited also to the admirable technical qualities of this achievement in which well-known obstacles of outdoor illumination have been mastered with extraordinary success.

This issue's frontispiece serves to illustrate the quality of grace as expressed by so beautiful and distinguished an exemplar as Edith Wynne Matthison in the character of "Miranda." The pose, as depicted by Mr. Mishkin's camera, expresses the poetry of arrested motion in a refined and dignified manner, demonstrating the principles upon which all the fine arts are founded. The attitude of the artist is somewhat statuesque, therefore the high key in which the picture is pitched seems altogether appropriate. Data: April, 11 A.M.; in professional studio; 8 x 10 Century camera; Dallmeyer lens, at F/5.6;  $2\frac{1}{2}$  seconds; Stanley plate; Metolpyro; 8 x 10 Azo print.

While the month of May permits us to enjoy the blossoming rhododendron and the caroling of the grosbeak, it affords us parting looks on disappearing snows and chilling streams. The view presented to us by R. C. Schultz, page 217, is one of supreme artistic beauty. The entrance of the meadow-brook into the picture-space, its sinuous course and gradual disappearance; the flattened banks, with promising verdure; the yearning elms, outlined against a hospitable sky — all seem to herald the advancing spring. Data: January 23, 1916, 2.15 P.M.; diffused light; 5 x 7 Conley camera; 8-inch R. R. lens; stop, F/8; 5-time color-screen; 1 second; Orthonon 5 x 7; pyro; 5 x 7 Artura Carlton Black; developer, Artura M. Q. formula.

In the woods, however, is the place to watch the dawn of spring, the unfolding of its secrets — the symbols of life and hope. First among the wild-flowers is the fragrant Trailing Arbutus, page 225, or, as it is more commonly called, the "Mayflower." But the poet is at hand to speak of the flower in terms caressing and befitting. Data: May, 1.50 P.M.; cloudy day; 12-inch lens;  $6\frac{1}{2}$  x  $8\frac{1}{2}$  Standard plate; pyro; platinum print.

With the work of William E. Macnaughtan, a raster-pictorialist, PHOTO-ERA readers happily are familiar. His wondrous landscapes are without sign of human life. They are eloquent without it. An exception to the artist's custom is the attractive rural scene, page 228. The laborers of the field are approaching in the distance, and unobtrusively form the balance to the lone apple-tree in the foreground of this perfect composition. The suggestion of atmosphere, the dominant quality of Mr. Macnaughtan's landscapes, is here strongly expressed. No data.

That it is possible to picture even war-scenes with artistic success is apparent in the three minutes of the firing-line in the heart of warring Europe. Pages 232 to 234. Mr. Dawson was probably more concerned with operating his camera than he was even with his personal

safety; but in less strenuous moments he exercised his ordinary skill, which implies a commendable degree of artistic perception and judgment, which is evidenced in his views of a field-kitchen, a Hungarian village and the bombardment of Przemyśl. Particulars such as are available are contained in the photographer's brief personal account. Mr. Dawson has taken an unusually large number of war-subjects, right on the firing-line — stirring, sanguinary, convincing. These, being somewhat foreign to the pictorial policy of PHOTO-ERA, were not utilized; but those who are specially interested in truthfully graphic portrayals of the European war will do well to communicate with Brown & Dawson, at No. 30 East 42d Street, New York, whose list of subjects is large and interesting. As Mr. Dawson has stated to me:

"We are three partners, all young men, and, while not the largest or oldest firm in our line, I think it is safe to say that we are one of the most energetic. Between the three of us we have covered almost the entire globe in the last five years making negatives for our stock. In pursuance of our policy of covering everything worth while in the news-line, I left for Europe in November of 1914, and campaigned back and forth across Europe with the various armies for a year and a half photographing everything alive or dead which came within the range of my cameras. I used a 3A Autographic Kodak for nearly all of my work, as I found it was by far the most practical. I also used a 4 x 5 Grafex for a while, but found it difficult to carry while traveling on horse-back. These pictures are now being used by the newspapers and magazines of the nation. Had no difficulty to get all the film I needed through the Kodak agencies in Berlin, Budapest and Vienna."

Mr. A. E. Churchill has appeared several times as author-photographer in the pages of PHOTO-ERA, and always with brilliant success. In the present instance he appears, pages 225-229, as the delineator of rural scenes, giving his artistic bent full sway, but having in mind the fellow-camerasist who is yearning to exercise his skill in similar fashion. Mr. Churchill has shown the way; let others follow.

It would be difficult to conceive a technically superior photograph of a bird's nest than R. W. Dawson's, on page 240, which is also a refreshing spectacle compared to the hastily procured specimens one so often sees. Bird-photography has its difficulties, no doubt; but with a suitable equipment and effective preparations, coupled with skill and perseverance, any intelligent amateur should be able to get pictures of bird-life, even amid exasperating conditions, that at least show clear definition, if not always artistic arrangement. Photographs that require an apology because of serious technical deficiencies — unless we except a certain class of war-scenes — had better not be offered for publication. Modern photographic apparatus, when used skillfully, will meet almost any contingency. Data: 5 P.M.; brilliant light, but shadow thrown on nest; Century Grand Sr. camera; rear combination of B. & L. VIIa Protar of  $7\frac{3}{8}$ -inch focus; stop, F/45; 10 seconds; Seed Non-Hal. L Ortho; pyro-acetone, 26 minutes in tank, 62°; print on Artura Iris, grade A; eggs, blue — a little lighter in shade than those of the robin.



## Advanced Workers' Competition

A PICTURE that does not tell a story makes a vain appeal to the average layman. Lacking color, a photograph must possess, at least, the element of imagination. The beholder has the opportunity to interpret the theme in his own way, conjure up a variety of associations and thus lose himself in contemplating the picture before him. This exercise of his imagination affords the true picture-lover infinitely more satisfaction than merely beholding the obvious appearance of the object depicted by the artist. This objective quality is what makes Mrs. Cassidy's masterly effort, page 243, so supremely beautiful and engaging. As in her exquisite Easter offering, "Silent Homage," which embellished our April issue, "Repent at Leisure" is founded on an extremely modest design—a lighted candle and a dead moth. The little episode here portrayed suggests a moral which may be applied to the dire consequences of any reckless or hasty act. But praise is also due Mrs. Cassidy for her truly artistic management of a theme which she conceived herself, and which, in other hands, might have been accorded ostentatious and, therefore, less successful treatment. A more convincing exemplification of the value of simplicity in composition, the artistic utilization of modest material, was never presented to the readers of PHOTO-ERA. Data: July, early evening; P. & S. 12-inch Semi-Achromatic Doublet, at full aperture; 15 seconds; 8 x 10 enlargement on Eastman Royal Bromide.

Robert P. Nute possesses a highly developed sense for the pictorial, which quality marked his two contributions to this contest—a superb snow-covered wood-interior and a street-scene. The latter, page 245, being more original in composition, was selected by the jury. With the exception of a slight technical fault in the left upper corner, the pictorial arrangement exhibits force, character and balance. Data: Fourth Street, Cincinnati; January 31, 1917, 2.30 p.m.; bright and smoky; 12-inch P. & S. Semi-Achromatic, at F/7; short bulb-exposure; Standard Orthonon; enlarged print on Royal Bromide.

The home-scene, presented on page 246, is by E. G. Dunning, one of New York's most successful home-portrait photographers; but unlike most of them, he has marked poetic fancy, which he loves to indulge whenever possible. His decorative design, "Memories" (PHOTO-ERA for February, 1915), and "Dickie's Breakfast" (PHOTO-ERA for July, 1916), are masterpieces of pictorial expression. In the present instance, Mr. Dunning, having finished a series of home-portraits, used for a subject a family friend—a fine specimen of a borzoy, or Russian wolf-hound, and his mistress. The group is extremely well done, though one cannot help thinking that the lady, seated in a spreading Peacock chair, and without the aid of any accessory, would form a superb camera-subject. Data: January, 3 p.m.; good light; 8 x 10 F. & S. view-camera; Spencer "Portland" soft-focus lens, 11½-inch focus; stop, F/8; ½ second; Hammer Blue Label; pyro in tank; 8 x 10 Artura Iris E. Rough.

## Beginners' Competition

THE little girl having her bath, and photographed in one of her happiest moods—page 249—gave the artist, Elizabeth Wotkins, an excellent opportunity to test her executive ability, and thereby win the highest honor conferred by the PHOTO-ERA jury. The burst of spontaneous laughter has been caught admirably—a feat which proves that occasionally the camera-artist rises superior to the painter. Data: Popular Pressman camera (3½ x 4½); Aldis F 4.5 Anastigmat; bright day in November; F 4.5; 1/125 second; Standard Orthonon;

M. Q. in tank; enlargement on No. 8 P. M. C. Bromide Buff.

There are admirable pictorial and technical qualities in Mr. Snyder's landscape, page 251. The composition, too, is praiseworthy. The foreground appears to be in too high a key to be entirely truthful, despite the fact that a color-screen was used. The fault may lie in the print or in the possibly overdeveloped negative. The entrance of the road is also a bit unfortunate, as with its exit the group of trees, at the right—which balances the rest of the picture—is detached and isolated thereby. In a similar view, by A. S. Workman, and published in March PHOTO-ERA, the road enters at the right, in the foreground, and disappears gracefully at a point to the left of the center—being managed with artistic judgment. Data: October, 3 p.m.; bright light; 3½ x 4½ Kodak; Zeiss Tessar IIb; 5-inch focus, used at F/11; 5-time color-screen; ½ second; Cramer Inst. Iso; pyro, in tank; 6½ x 8½; No. 8 P. M. C. Bromide enlargement with P. & S. Semi-Achromatic lens.

There can be little doubt that the birds, "fast in the ice," in Mr. Cunningham's picture, page 253, feel the "spirit of winter," which they help to express. They are also accountable for the element of novelty which marks the picture, whose general pictorial quality is very pleasing. Data: February, 1917, 2 p.m.; bright sun; 5 x 7 Graflex; 8½-inch B. & L. Zeiss Tessar Ic, F/4.5; stop, F/6.3; 3-time ray-filter; 7/10 second; Eastman film; Eastman powders, in tank; 5 x 7 print on Artura Non-Curling, Hard; Eastman's M. Q. View taken in a New York park.

## Mounting Wet Prints a Cause of Cockling

PRINTS to be mounted with paste of any kind should be quite dry. One sometimes sees the advice given to have them quite wet, just as they come from the wash-water. This may do if they are to be burnished at the finish, as this would counteract any severe cockling; but without some operation of the kind, mounting wet prints can lead only to very troublesome curling of the mounted print. A very little of the adhesive should be used, it should be distributed quickly and evenly over the print, and as soon as this feels at all limp, it should be laid in position on the mount, covered with a clean piece of paper, and well rubbed down into contact. Some workers use a roller squeegee for pressing down the print; but small prints can be done just as well with the finger-tips.

Neatness in mounting depends upon getting the print down in the proper place straightaway, which should therefore be marked out for it beforehand, as any attempt to shift the print on the mount is certain to cause some of the mountant to get onto the face of the print or card. We must also be careful not to apply any more of the paste than is actually necessary, for the same reason, as it will squeeze out at the edges. None whatever should come out there, no matter how great the pressure on the print; if it does, it is a sign that too much has been used.

In applying the mountant, and in rubbing down the print, special attention should be paid to the edges and corners, to make sure that a sufficient quantity of the adhesive is present, that the mountant is well worked into the paper and that the print there is in close contact with the card. The mounted print should be covered with a clean piece of paper and can then be put away to dry under pressure.—*Photography.*

Camera-man—"I'm sorry, Jack; but we'll have to do that business over again where you fall off the roof into the rain-barrel and are run over by the steam-roller. My film gave out."—*Life.*



# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Amateurs, Ahoy!

AMONG the many camerists who write to PHOTO-ERA for information on photographic matters are some who do not appear to be on intimate terms with the word "amateur." They spell it variously—"amatuer," "amature," "ametur," "armature," "amiture," "amat-ur," and even "amachoor"!

For heaven's sake, good people, pray look carefully at the word which designates the character of your hobby, and get it right next time! You can pronounce it am-à-tūr' (like n in fur) or am'-à-tūr (like n in sure), but spell it "amateur."

## The Punishment Fitted the Crime

THE plates were undergoing their final washing in the club's darkroom, and the members, freed from the strain of non-actinic light, were lolling about in the "lounge," telling stories and discussing subjects to write up for their favorite journals.

The latest addition to the club terminated the séance by discoursing ostentatiously, but not too accurately, on Roman history. He made a number of breaks which seemed to pass unnoticed; but when he named "Ibid" as the Latin author whom he loved best to quote, a bomb was exploded under his chair, and this shattered the ambition of a budding photographic writer.

## Pictures of Spring-Scenes

THE ever-entertaining and humorous writer, "The Walrus," in *Photography and Focus*, is particularly amusing in a recent issue of that weekly. Owing to the restricted use of cameras—enforced rigidly by the British Government—amateur photographers are hard put to find new and interesting subjects. Virtually, the only spot of perfect photographic freedom left to the British camerist is his own garden or yard. With this fact in mind, a friend appealed, for a solution of the dilemma, to "The Walrus," who, with his characteristically ludicrous grasp of a situation, made the following suggestions.

"A pathetic note can be struck by making studies of once hopeful persons contemplating the pitiful little pile of seed potatoes they have received in exchange for nineteen and elevenpence. During the interment of these embryonic spuds a watchful eye should be kept on such incidents as this: in one plot a disconsolate worker stands leaning on his hoe, à la Millet, gazing sadly into space, when a neighboring murrphy-planter takes him squarely in the off-side optic with a diseased tuber he has hurled away in indignant disgust. Records should be made of the hurler as he appeared in his normal condition, and as he figured after the man with the hoe had finished with him.

"When, if ever, crops begin to appear, and the voice of the spring-cabbage is heard in the land, and the succulent lettuce waves its spreading branches in the air, there is prospect of good photography when the allottees are furiously engaged in hustling a stray cow onto each other's plots. The cow alone should be worth the trouble.

"An effective piece could be made of a man getting up his crop of onions, of the famous Samson strain,

while his neighbor, engaged in reaping radishes, sings just loudly enough for the purpose, 'Oh, dry those tears.' Then we might get a rendering of a parlous purloiner pinching parsley, or of a bold bad brigand boning broad beans. Then there should be plenty of still-life subjects, such as freak potatoes, twin onions, radishes resembling Romulus and Remus, phenomenal earth-worms, earwigs' nests built in unusual spots, picturesque homes of the Colorado beetle, fancy articles produced by wireworms, and specimen bumps raised by mosquitoes. The whole business seems to me one of exceptional cheerfulness and promise."

## Nerve-Shocks for Amateur Picture-Framers

THE nerves of some Leicester people have been greatly disturbed by crashes heard in the night lately—night-crashes always give at least twenty times their value in noise. These crashes have been heard chiefly in the houses of amateur photographers and others who have been in the habit of framing their camera-work by the cheap but tasteful "passe-partout" method. For the uninitiated it may perhaps be necessary to explain that prints (engravings, etc.) are by this method placed behind a sheet of glass, and backed by a sheet of cardboard cut to the same size. The whole is stuck together and held fast by strips of strong ornamental paper, such as bookbinders use. These, hung on household walls, may be made to give very artistic effects—until the damp weather we have had during the last few days arrives. Then does the glass attract the moisture of the vapor-clogged air, condense it, and cause it to play havoc with the extemporized "frames," with resultant nerve-shocks to the household.—*Leicester Post*.

## Putting One Over

A POLICE-MAGISTRATE, in Cleveland, was disposing of cases at the rate of about two a minute, with great exactness and dignity, being judge, jury and attorney, all in one.

"Then you are sure you recognize this camera as the one stolen from you?" he said to a complainant.

"Yes, your honor."

"How do you know that it is yours?"

"You can see that it is of an unusual make, your honor," replied the witness. "That is the way I know it."

"Are you aware, sir," shouted the justice, turning to a desk back of him and producing a similar camera, "that there are others like it?"

"Indeed I am," replied the witness, still more placidly. "I had two stolen."—*Adapted*.

## Worth Trying

*Photographer*—"Where is that new office-boy?"

*Assistant*—"He is up in the darkroom."

*Photographer*—"What is he doing up there?"

*Assistant*—"When I saw him a few minutes ago he was holding his pay-envelope in front of the enlarging-machine."—*Youngstown Telegram*.





## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



### George Lindsay Johnson Serving in the Medical Corps

WE are informed that Dr. George Lindsay Johnson (author of "Photographic Optics and Color-Photography," and "Photography in Colors") is now serving as captain in the South African Medical Corps, stationed at Durban. His eldest son, Angus, was killed in action in Mesopotamia. His only other son, Captain Howard Fife Johnson, has been wounded no less than ten times, and he is still fighting. Truly, the Johnsons are doing "their bit."

### The Death of Thomas W. Smillie

THE sudden and unexpected death of Thomas W. Smillie, for forty-eight years official photographer of the Smithsonian Institute, at Washington, came as a shock to friends all over the world. He died, March 7, at the age of seventy-four. Mr. Smillie was a Fellow of the Royal Photographic Society, Honorary President of the Federal Photographic Society of Washington and custodian of the photographic collections in the National Museum. The advancement of these collections was Mr. Smillie's life-work, and to-day they are among the most complete histories of photography extant.

### The Dealers' Convention

THE fifth annual convention of the Photographic Dealers' Association was held in the Tuller Hotel, Detroit, Mich., March 19 to 24. The attendance was unusually good in view of the threatened railroad strike. Some of the manufacturers had difficulty to get their displays on time, as freight and express traffic was greatly hampered.

The sessions were most interesting and valuable, the best being devoted to talks on display. A series of window-trims was made on the stage, and a general discussion held on materials and fixtures, that contributed toward an attractive and artistic display of goods. The show-window was emphasized as one of the best assets to any business if properly handled, and the lecture was one of the most interesting of the convention.

The manufacturers were given an opportunity to show to the members the new goods they were marketing, and to present them in a manner enabling the dealers to show them properly to the trade. It was found that there were many articles of undoubted merit that were not known nor shown by the dealers, to the detriment of themselves, the manufacturers and to the customers. It is within the province and it is the duty of the dealer to know about, and to offer to his trade, every piece of apparatus and every material used in photography that will be of practical service in the making of pictures or of help in doing better work. The dealers were given a splendid opportunity to learn about many new things, and the public will soon be able to try them.

Many dealers do not know how to sell their goods properly. They have a general knowledge, but are not coached up on those points that will enable them to explain every little detail in a way that the customer can understand.

Frequently the purchaser is unable to get proper results simply because he does not know how to use the

article. He would frequently try new methods of work if he were intelligently instructed in the use of the apparatus or materials. He misses good things because he has not the chance to take advantage of what the market affords, and the manufacturer suffers because his product is not explained as it should be. The Dealers' Association is working to overcome this, and to so raise the standard of displaying and selling goods that the trade will be benefited from manufacturer to consumer.

There were four addresses at this Convention which were well worth the time and money spent by the dealers who attended. The one, "Controlling your Business," by W. R. Thompson, of the Burroughs Adding Machine Co.; the one, "Trade Betterment," by E. B. Moon, of Chicago; the one, "Window-Dressing," by C. P. Wendell, of J. L. Hudson Co., and another, by Mr. Mills, sales-manager of the J. L. Hudson Co., will be printed and mailed to all members of the Association.

### The M. A. A. A. Camera Club of Montreal Eleventh Annual Exhibition

NOTWITHSTANDING the unsettled conditions incident to the war, the artistic quality of the pictures exhibited at the club-rooms of the M. A. A. A. Camera Club of Montreal, March 26 to 31 inclusive, was very gratifying, and it made possible a very presentable exhibition of amateur-photography. Exhibits were received from many parts of Canada and the United States. Mr. William Brymner, President of the Royal Canadian Academy, Mr. Sydney Carter and Mr. T. H. Dupras acted as judges. The prizes were divided into five classes — Portraiture, Landscape, Waterscape, Architecture and Genre. A silver and a bronze medal were awarded in each class. The prize-winners and honorable-mention list follow: *Class A, Portraiture*, first prize, W. G. Fitz; second, T. W. Kilmer; honorable mention, B. B. Pinkerton. *Class B, Landscape*, first prize, W. H. Rabé; second, C. W. Christiansen; honorable mention, Wm. A. Guyton, Jr. *Class C, Waterscape*, first prize, Albert Kelley; second, W. G. Fitz; honorable mention, Dr. D. J. Ruzicka and Paul Wierum. *Class D, Architecture*, first prize, O. L. Griffith; second, W. H. Rabé. *Class E, Genre*, first prize, W. G. Fitz; second, O. L. Griffith.

### Utah Camera Club

WE are informed by the corresponding secretary of the Utah Camera Club, Dr. W. H. Hopkins, that this club now has a membership of nearly eighty and includes the best camera-users in the state. The exhibition by members of the club was held April 8 to 10 inclusive at one of the largest hotels in Salt Lake City. It is evident that the Utah Camera Club is well-founded, that its members are enthusiastic and that it is growing fast.

### Bertrand H. Wentworth's Art

PHOTO-ERA readers have reason to remember, pleasurably, a sympathetic paper, by Bertrand H. Wentworth, of Gardiner, Me., on the subject of photography as a means of expression, and illustrated with a series of very beautiful pictures, that appeared in the July, 1915, issue. Mr. Wentworth exhibited at

the gallery of the Society of Arts and Crafts, Boston, the last two weeks in March, a large collection of marines and winter-landscapes that attracted considerable attention from the public and the local press. William Howe Downes, art-critic of the *Boston Evening Transcript*, expressed himself as follows:

"Mr. Wentworth is conspicuous among those artist-photographers who devote themselves exclusively to landscapes and marine-pieces, and his plates are highly impressive and original. The luminosity of some of the snow-scenes, taken in full sunlight, is very remarkable, almost dazzling. There are interesting pictures of huge snow-drifts, and of snow in the woods, in the fields, etc., where the tracks of various wild animals and birds are to be seen in the surface of the snow, forming curious patterns. Mr. Wentworth made many of his marine-pictures on the rockbound island of Monhegan. His fog and mist effects are especially notable. The surf-pictures in stormy weather are most striking for the depiction of huge billows and spray and the wild commotion of the sea in its tempestuous moods."

### Yonkers Camera Club

THE club will hold its annual exhibition at the Library Hall from May 20 to 26. Bronze medals will be given for the first and second prize-winners in each of the five classes, and a silver medal for the best picture exhibited. Entries must be in by May 14, and entry-blanks may be obtained from the secretary. The club expects to be installed in fine new quarters at the Hollywood Inn next fall, and expects to increase its membership accordingly. A. E. COPE, *Secretary*.

### Nordisk Tidskrift för Fotografi

WE have received recently the first and second numbers of *Nordisk Tidskrift för Fotografi* (Scandinavian Journal of Photography), edited by John Hertzberg and published in Stockholm. Mr. Hertzberg is Royal Court Photographer by special appointment to His Majesty the King of Sweden, and lecturer on photography at the Royal University College of Polytechnics in Stockholm. This new photographic magazine has been well received in Scandinavia, and it has already become the official organ of the two societies, Fotografiska Föreningen and Uppsala Fotografiförening. The magazine is well printed, attractively illustrated and contains articles of value to amateur and professional photographers. Well-known firms patronize the advertising-pages and we do not doubt that the *Nordisk Tidskrift för Fotografi* will take its place among the high-class photo-publications of the world.

### A New Club of Pictorial Workers

STIMULATED by a desire to improve the artistic standard of the pictorial workers in the United States, a number of pictorialists have organized themselves into an institution known as the "Pictorial Photographers of America." The officers are Clarence H. White, president; Dr. A. D. Chaffee, vice-president; Gertrude Käsebier, hon. vice-president; Dr. Charles H. Jaeger, treasurer; Edward R. Dickson, secretary; and Margaret De M. Brown, corresponding secretary; with Arthur D. Chapman, Walter L. Ehrlich, Ray Greenleaf, Maud H. Langtree, Charles J. Martin, Henry Hoyt Moore, Dr. D. J. Ruzicka, Adele C. Shreve and Karl Struss forming the executive committee.

The object of this concerted movement is a laudable one, and deserves the support of those who are interested seriously in the art of photography. The scope is broad and liberal, and applications for membership will be received from practitioners as well as from lay-

men. The annual fee is \$5.00, to be sent to Dr. Chas. H. Jaeger, National Art Club, 119 East 19th Street, New York. The secretary, at the same address, will furnish gladly complete particulars of the object, character and scope of the new organization, and it is hoped that he will hear from a goodly number of PHOTO-ERA readers.

### Boston Herald Awards Prizes

THE *Boston Herald* has been for some time past soliciting pictures from amateur photographers, throughout New England, many of which have been published in the rotogravure section of its Sunday editions, and for which a uniform fee of \$2.00 had been paid. These, together with other prints submitted by amateurs, were assembled at the studio of J. H. Garo, April 16, for the purpose of selecting the most meritorious prints with a view to publishing them and awarding them prizes. The result of the jury's decision was as follows: first prize, a 3A Kodak, for "Winter in the Woods," Harry W. Sanson; second, \$10.00 in cash, for "September Morning on the Summit of Mt. Washington," Harold I. Orne; third, \$5.00 in cash, for "The Birches, Monponsett Lake," Eli G. Edgemont. Honorable mention was bestowed upon "Childhood-Days," O. D. Howlett; "Off Nahant," E. H. Washburn; "Gateway to Cloudland," Kenneth D. Smith, and "Interior of St. John the Divine," Arthur G. Haskell. The jury was composed of Frederick W. Coburn, professional art-critic; Philip L. Hale, portrait-painter; J. H. Garo, photographer and painter, and Wilfred A. French, amateur-photographer, writer and publisher. The established fee of \$2.00 for the right to publish a print in the art-section of the *Herald* did not seem to have proved sufficient incentive for amateur-camerists to submit their very best efforts, for by far the most prints the jury examined contained little merit, artistic or otherwise. The judges, some of whom did not seem to have a sympathetic appreciation of the true character of amateur-photography, its aims and possibilities, nor of the desire of the *Boston Herald* to provide attractive camera-pictures for its weekly art-section, bestowed the prizes on pictures which, with one exception (Summit of Mt. Washington in Winter, by Harold I. Orne), would not be considered favorably by any jury composed of photographic experts. There is one redeeming feature, however, in that the rotogravure reproductions in the *Boston Herald* are generally superior in clearness, brilliancy and effectiveness to the original amateur photographs.

Now that the *Herald's* policy in recognizing and utilizing meritorious photographs is better known, camerists throughout New England will feel encouraged to improve their work and to submit pictures worthy of the substantial prizes offered.

The *Herald* will announce the awards of this first photographic "exhibit" of 1917 in its Sunday edition of May 6; together, if possible, with rotogravures of the successful pictures. During the summer there are to be similar "exhibits" of amateur-photographs. Meritorious prints will continue to be accepted and published at the regular fee of \$2.00 each, to become the permanent property of the *Herald* and to be included in the next "exhibit."

### A Careful Photo-Dealer

"Is this cellar perfectly dry for the storing of dry-plates?" inquired the prospective lessor.

"Well," replied the talented agent, with a knowing wink, "it always had been until the Prohibition-law went into effect."





# WITH THE TRADE



## New Cirkut Camera Catalog

A COMPLETE, interesting and valuable catalog describing Cirkut Photography and Cirkut Cameras may now be obtained from Folmer and Schwing Division, Eastman Kodak Company, Rochester. Those interested in panoramic photography will find that this new catalog answers concisely questions dealing with the market for panoram pictures. The illustrations are excellent throughout, and the entire catalog is well printed and attractive.

## Ensignette Cameras for Soldiers

SINCE the beginning of the European war, English troops have used Ensignette cameras successfully at the front. Now the same equipment is offered to our own soldiers by G. Gennert, American agents for Ensign cameras. The simplicity, compactness and efficiency of the Ensignette camera merits the inspection of soldiers, sailors and amateur-photographers.

## Camera for Aërial Use by the Army and Navy

THE Eastman Kodak Company has achieved the invention of a camera for use in airplane operations, and is now prepared to furnish it to the War and Navy Departments. The United States Government has engaged to take the complete output of the Kodak Company as fast as these cameras can be supplied.

The Eastman camera for airplanes is said to be superior to any camera for aërial use now employed by any of the European armies. It is adjustable to virtually any angle, instead of being operative only when directly over the object to be taken — as is the case with the British and French cameras. It is equipped with various safety devices rendering it adjustable to different conditions of the atmosphere, including rain and fog.

Several local tests have been made recently of the camera, and all these have proved to be satisfactory. The camera is able to take pictures at a height of nearly 5,000 feet. Either film or plates may be used in it.

*Bulletin of Photography.*

## A Marvelous Motion-Picture Camera

IN advertising, excessive praise of the merits of any article is not approved by shrewd advertising-experts; but direct misrepresentation and exaggeration, calculated to trap the uninitiated, is suicidal. An example in point is an amateur motion-picture camera, placed on the market early this year, offered at a bargain-counter price of \$29.75. The wildest claims are made for it by the makers. They state that their "remarkable invention" and "inestimable gift," "this miracle in a metal box," is equal in performance to the best professional machine selling at \$1,200 up to \$2,000! Also that it costs less to operate than an ordinary camera. Are these claims not enough to make the average person pause, catch his breath and wonder?

But the makers, determined to create a demand for their "miracle camera," insidiously increase the cost of the outfit by charging \$55.00 additional for the "special home-projector," which is indispensable because the camera does not use standard size motion-picture film. Thus the total cost of the complete outfit is \$84.75

instead of the heralded \$29.75! Further, the makers declare that "every dealer sells it." But does he, unless he has a grudge against somebody; and most photo-dealers are honest men.

We could go on and explain in detail — if we had the space — how utterly impossible it would be for the makers of this motion-picture camera to prove their ridiculous assertions. As a matter of fact, an efficient and properly constructed motion-picture camera, using standard film and meeting the requirements of an amateur, costs at least \$150, the projector \$225 additional — total, \$375.

## German Air-Craft Cameras

OF interest, at the present time, is the character of the photographic equipments carried on German airplanes and Zeppelins. From a French account, we learn that the examination of the photographic equipment of a Zeppelin which had fallen in France yielded the usual information. The camera was constructed of metal, measured 16 by 16 by 12 cm., was fitted with a 12-inch Zeiss Tessar lens F/4.5, and was provided with a lens-hood enabling photographs to be taken against the light. There was an arrangement permitting the insertion of a color-screen for use with panchromatic plates. The outfit found on board an airplane (aviatik) had the appearance of a firearm with the butt-end capable of sighting in all directions and the trigger governing the operation of the shutter. The shutter-speeds varied from  $\frac{1}{50}$  to  $\frac{1}{800}$  second, with exterior control by means of a lever. The body of the apparatus was in metal covered with an impermeable varnish. The lens was a Zeiss Tessar, F/3.5, of about 10-inch focus. It was fitted to receive two screens — a yellow color-screen for use with orthochromatic plates, and the other an uncolored one, for the purpose of correcting the modification of the focal distance resulting from the use of the color-screen. There were two finders for direct vision, one interior and the other exterior. Six plates,  $3\frac{1}{2}$  by  $4\frac{3}{4}$  inches, were carried in a magazine.

## Efficiency of Photo-Era Publicity

A WELL-KNOWN amateur-photographer inserted a five-line classified advertisement in a recent issue of PHOTO-ERA. He placed his own valuation on the equipment and, on that account, was rather skeptical about results. To his astonishment and delight, replies began to come to him from all parts of the country. Before he had time to answer them, he received a special delivery communication and then a telegram requesting him to ship the equipment C.O.D. without delay. Replies were received from several cities in the East and Middle West, one from Salt Lake City and another from Seattle, Wash. Needless to say, our advertiser was well pleased, and he it was who gave us the above information, with the remark that "PHOTO-ERA certainly gives its advertisers efficient and far-reaching publicity."

## The Last Call

Now is the time to plan and execute that summer advertising campaign. Immediate action will bring very satisfactory results.



## BOOK-REVIEWS

*Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.*

**PHOTOGRAMS OF THE YEAR 1916.** The Annual Review of the World's Photographic Work. Edited by F. J. Mortimer, F.R.P.S. Price, paper-covers, \$1.25; cloth, \$1.75; postage extra. London: Hazell, Watson & Viney, Ltd.; New York: Tennant & Ward, 103 Park Avenue, American Agents.

The excellence of the current edition of this interesting annual is evidence of the continued activity of the English pictorialists and the publishing business. The book is referred to in deserved complimentary terms by our English correspondents in their current "London Letter." In addition, it may be well to mention some of the most attractive of the eighty-four plates, which constitute the pictorial section of *Photograms, 1916*. "Aziz," a superb, statuesque figure, by Angus Basil; "Street in Falaise," J. H. Anderson; "A Decorative Study" (back of a nude), R. Belfield; "Durham Cathedral" (aisle and font), F. H. Evans; "Pierrette," Hugh Cecil; "Taj Mahal," G. Lynde; "Close of an Autumn-Day," Rudolf Eickemeyer, Jr.; "Undine," Herbert Lambert; "Louis Raemaekers" (portrait), Walter Benington; "L'Intimité" (Dutch Interior), Richard Polak; "What's Up?" Marcus Adams; "The Witches' Cauldron," Alex Keighley; "Rose-Dance of the South," Louis Fleckenstein; "Premavera and Beatrice Mariagrate" (in dancing-duet), H. B. Goodwin, and a tragic episode of present-day marine warfare (frontispiece), by F. J. Mortimer.

The text — consisting of reviews of the pictorial activity in Spain, Portugal, Holland, Scandinavia and the United States; "The Future of Pictorial Photography," by A. L. Collum; "Essential Aims in Photographic Art," by Antony Guest; a critical review of the pictorial contents, and one by the editor (Mr. Mortimer) — is illuminating and helpful, and, together with the illustrations, will appeal strongly to the student and the picture-lover. The edition this year, is limited to actual needs, and the American supply will soon be exhausted. Moral!

### English Photo-Books Temporarily Out of Stock

OWING to the unavoidable conditions now existing it is extremely difficult to fill orders for English books on photography. In these circumstances, PHOTO-ERA readers are advised to defer placing orders for these books until American publishing-houses have had an opportunity to replenish their exhausted stocks.

Among the English books difficult to obtain at the present time are the following: Cassell's "Cyclopedia of Photography," by Bernard E. Jones (PHOTO-ERA has two copies left); "Photography of To-day," by H. Chapman Jones; "Photography for the Press," by F. J. Mortimer, F.R.P.S.; "The Oil and Bromoil Processes," by F. J. Mortimer; "Concise Photography," by E. O. Hoppé, and other standard works on photography. Personal service should not be expected until after the war, when fresh supplies will arrive.

## The Best Book on Retouching

MOST of the books that treat on retouching and working on the negatives, with the intention to improve them, are very incomplete and unsatisfactory. Everybody interested has been looking for the ideal book on this important subject, and, considering the opinions expressed by expert professional photographers, PHOTO-ERA takes pleasure in recommending, to professionals as well as to amateurs, the best book on this subject printed in the English language. We refer to the work, "A Complete Treatise on Artistic Retouching, Modeling and Etching," by Clara Weisman — an expert retoucher and, for many years, the head of the retouching-department of one of the largest photographic establishments in this country. The author is by training, experience and temperament well-fitted to treat so difficult a subject as retouching; and admirably, indeed, has she performed her task. Not only does she set forth, at once clear and concise, the principles of sane retouching and their application, but how to avoid the common error of spoiling a likeness and its anatomical aspect by senseless manipulations. She demonstrates the importance of truth in modeling the human face, and illustrates by means of examples the danger of falsifying the results of the lens. On the other hand, there are numerous delightful illustrations of genre and portrait-photography, exemplifying the best principles of the retouching-art which make for the artistic blending of truth and ideality. The author also illustrates how successfully an expression of gloom may be converted into one of happiness, and how other modifications on the negative may be effected by skilful use of pencil and etching-knife, urging only such technical manipulations as may be successfully practised by the retoucher of average ability, her one thought being the attainment of supremely artistic results by easy and sensible methods.

Although the author is a practical artist and a recognized authority in her specialty, she supports her advice with references to well-known art-principles, thus imparting to her words greater value and force. The closing chapter, "Style and Individuality," reveals the author's familiarity with the works of the great painters, and worthily terminates a volume that should be in the hands of every practical worker — professional or amateur. We accord it our heartiest endorsement.

The book is fully illustrated and only a few copies are left. It was published at \$2.50, but will soon be out of print. Copies will be sent by the publisher of PHOTO-ERA on receipt of \$2.00 each.

### Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.

### Accuracy of Exposure

*Timid Suitor* — "I suppose when you recall what a handsome man your first husband was you would n't consider me for a minute?"

*Pretty Widow* — "No; neither would I consider you for a second."





# RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



CLAYTON LAING, of Chicago, Ill., has just been issued a patent, No. 1,218,946, on a Photometer, which has been claimed as follows: Means for comparing light-rays, comprising a comparator adapted to be exposed to natural and artificial lights, and means to simultaneously vary the intensity of rays from said lights to balance the light-intensity in said comparator.

A Patent, No. 1,219,801, on a Camera has been granted to Carl Bornmann, of Binghamton, N. Y. The gist of the invention is claimed that in a camera embodying a bellows, and a lens-casing, a perforated plate at the forward end of the bellows, the perforations whereof connect with the interior of the bellows and are secreted behind and shaded by the lens-casing, and means to prevent the entrance of light to the interior of the bellows. The inventor has assigned his rights to the Ansco Company, of Binghamton, N. Y., a corporation of New York.

Patent No. 1,219,588 has recently been issued to Alfred A. Ruttan and Charles E. Hutchings, of Rochester, N. Y., on a Photographic Film-Pack, in which it is claimed that the combination with a case and a partition-member, therein dividing it into exposure and storage chambers, the former being provided with an exposure-opening, of a follower for pressing the films toward the latter, and having an opening therein and an extension on the partition member extending through the opening in the follower, and serving as a guide for the follower. The patentees have assigned their rights to the Eastman Kodak Company, of Rochester, N. Y., a corporation of New York.

Patent No. 1,218,273 has just been granted to Andreas Kiss, of Cincinnati, Ohio, on a Camera. The inventor claims a camera comprising a body, a lens secured to the body, a shutter, a card-pack holder located back of the shutter, a developing-tank located adjacent to the pack-holder, said shutter when withdrawn being adapted to expose the foremost card of the pack, and to remove the exposed card from the pack and to permit it to drop into the developing-tank when moved to its closed position, and means to maintain the cards in position to be engaged by said shutter, said means consisting of a plate, a spring mounted on the plate, and hooks adapted to secure the plate to the holder, whereby the spring is maintained in normal engagement with the cards. The inventor has assigned one-half of his rights to Martin Rusz, of Cincinnati, Ohio.

A Photographic Camera, patented as No. 1,218,135, has just been invented by Ernest E. Underwood and Frank H. Reynolds, both of Rochester, N. Y. The following has been claimed: The combination with a body having film-chambers at both ends, the back end and front walls of which are relatively fixed, and a bellows and front, of a removable and replaceable intermediate element constituting the bellows-chamber, and forming the inner walls of the film-chambers so that the latter are made accessible for the insertion of film by removing the said element in a forward direction. These patentees have assigned their rights to the Eastman Kodak Company, of Rochester, N. Y., a corporation of New York.

A lens-drilling machine, by Gustav A. Bader, of Rochester, and Chauncey W. Howland, Geneva, N. Y. Assigned to The Standard Optical Co., of Geneva. The patent is No. 1,218,041.

## Animated Cartoons

THE artist, be it Bray or Oppen, works with a corps of assistants who, systematically and very quickly, draw the general design of the scene, including the stationary objects that are likely to be featured on the screen for a period of time varying from a number of seconds to one minute or more. For instance, the episode where John Bull is pursued by a bear, then takes refuge on the limb of a tree (to the great delight of the Kaiser, who is not far away), occupies the screen for several minutes, during which time the landscape and the tree with its fateful limb remain virtually unchanged. Now the sketches of such a protracted scene are drawn by the artist's staff of assistants, and the artist himself supplies the figures with the various changes of movement and expression. The assistants make as many duplications of the picture as are required, and in this manner the number of drawings required for the reel is produced in an incredibly short space of time.

The negative or original film is made about as follows: The pictures are copied upon a regular motion-picture film by means of a motion-picture camera at the rate of one every few seconds. The copying-camera is placed overhead and directed downwards upon the drawings, which, placed at the proper distance from the camera, are fed by the operator, one at a time.

From this negative film, which obviously contains an immense number of pictures following each other in quick succession, is made the positive film that is eventually run in the projection-machine, and thus the pictures are projected on the screen. The jerky motion of their appearance is due to the fact that the original pictures are drawings, representing, say, the beginning, middle and end of a motion, and projected according to the humor of the situation — one every few seconds or one or more per second.

## Expediency of Identification-Cards

ON account of the Protean character of photography, photographic prints will not be admitted as evidence in certain courts of law in this country. Nevertheless, the idea of utilizing the portraits on identification-cards is now being adopted generally. The Edison Electric Illuminating Company, of Boston, informs its patrons that all means of identification heretofore used by its employees are canceled, and that in future every employee will carry a personal identification-card bearing his photograph and signature.

But as a safeguard to the householder, this method is not altogether infallible; for what is to prevent an impostor from carrying an identification-card of his own and similar to those issued by the company? It would probably be no more difficult to prepare than a forged cheque, and the trouble and expense, as well as the personal risk involved, would be more than offset by the successful issue of the crime committed by the false inspector. No; to be proof against misuse, the photographic identification-card must be seconded by some private system of checking adopted by whoever issues it. There is no doubt that an efficient method will be discovered whereby the public and large corporations may transact their regular business with increased efficiency and in perfect safety.



"PHOTOGRAMS OF THE YEAR" (1916) has just reached us. That this annual record of pictorial photographic progress should be late in appearing is hardly likely to cause astonishment when the difficulties of publication in present circumstances are taken into account. In the third year of the war, when so many extra restrictions have been placed on all that concerns photography, from the manufacture of materials to the actual taking of pictures, the wonder is that "Photograms" has appeared at all. And yet here it is, unimpaired in size and quality.

The first part of the book is devoted to several articles of interest. There is the usual review of the Year's Work by the editor (Mr. F. J. Mortimer). Mr. W. R. Bland criticizes some pictures of the year. "Essential Aims in Photographic Art" is treated by Mr. Antony Guest; and Mr. A. L. Coburn preaches a sermon on "The Future of Pictorial Photography" in which he shouts vigorously to the photographic world, "Wake up!" just as if he were in a land of peace and quiet, and not a neutral in a war-saturated country.

As well as these stimulating articles, we have the usual feature of a statement of the position of pictorial photography in various countries. That on America is by W. H. Porterfield; Scandinavia, H. B. Goodwin; Holland, F. L. Verster; Spain, J. O. Echague; and Portugal, Viscount de Saevem.

And then we come to the reproductions of the pictures of the year, of which there are eighty-five. Many of these are full-page prints, and the blocks are of much the same quality as last year. Among the English exhibits portraiture is well to the front, probably because so many workers' usual subjects are at present forbidden. In many parts of the country even the carrying of a camera is sufficient to cause the arrest of the owner. Contributions from France, Russia and Italy have been comparatively small, and, of course, the enemy-countries are represented not at all. But in spite of these gaps, the index reveals that work has been sent in from very various parts of the world, both to the late London exhibitions and for reproduction in "Photograms of the Year," and one is struck by the high standard and the advanced point of view of by far the greater number of the pictures reproduced.

Mr. F. H. Evans, who is one of our best-known photographers, and particularly famous for cathedral-interiors, is also a bibliophile, and occasionally issues privately printed books. About a year ago, he was responsible for a beautiful production of a variorum "Omar Khayyam;" he has now followed this up with a reissue of Holbein's "Dance of Death." The reason of this reference to the subject here is that Mr. Evans has used photography, and with great skill, in making the illustrations. It occurred to him that, owing to the tiny dimensions of the originals ( $2\frac{1}{2} \times 1\frac{1}{2}$ ), it is difficult to appreciate the details with which they are crowded. The only thing to do was deliberate photographic enlargement. Working from a perfect copy of the book, he photographed all the pictures and made line-blocks four times the area of the originals. From these, prints were taken by hand. Although the experiment may have lost some of the exquisite fineness of the originals, the results are altogether charming, and it would have to be a very expert photographer who would discover that they were enlargements. Mr. Evans worked from the first complete edition published in 1547, in which there are forty-nine cuts — not a small or an easy undertaking to have carried out successfully.

The present exhibition at the Little Gallery is one of pictorial photographs by Dr. Henry Buerger Goodwin, of Stockholm, Sweden. It is quite one of the best shows Mr. Mortimer has got together there. Dr. Goodwin, like so many American photographers, has passed from amateur to professional, and one sees, or imagines one sees, traces of both influences. Had fate left Dr. Goodwin an amateur, pure and simple, he would probably have developed still further along the lines of a poetical idealism, whereas the bracing expediency of business has given his talent a more realistic bias. Not that one advocates this crude quality in photography, and there is no fear of Dr. Goodwin becoming a pin point realist, but at the same time there is no point in pretending our craft is seen at its best when it attempts the ultra mystic and vague.

This show is rather a good example of the photographer being influenced by his sitters and subjects, and in looking at the prints one could almost guess the effect they had had on Dr. Goodwin. There were a good many portraits of well-known Swedish actors and actresses of the modern school, and their treatment differed — though not at all in an obvious way — to that given, for instance, to the portraits of "Viola Meynell," "The Artist" and "Andreas Zorn." One had the feeling that in some of these Dr. Goodwin had let himself go, so to speak.

"Andreas Zorn" is one of the best in the show, and is the biggest as regards actual size of print there. Somehow it had to be, one thinks; such an imposing personality could no more have been crowded onto a half-plate ( $4\frac{3}{4} \times 6\frac{1}{2}$ ) than Lenbach could have painted a miniature of Bismarck.

There is one nude in the show, called "The Shawl." It is a decorative effect, but had rather vague values, so that one could not see where the shawl left off and flesh began. Perhaps Dr. Goodwin had not intended us to see; but it seemed a pity not to give the camera the chance to render textures in the masterly way it can.

One of the most satisfying portraits in the gallery is that of "Viola Meynell." Those who have read this young writer's remarkable books will feel how cleverly Dr. Goodwin has rendered this elusive personality. It is by far the best we have seen of her, and she has been a subject on which a good many modern photographers have tried their hands.

Not all talented photographers are so sensitive to outside influences as Dr. Goodwin. We even felt ourselves affected by the reflex action of his moods, and, as we studied his pictures on the wall, we argued whether this extreme sensitiveness was a gift to be prized or a failing to be lamented. One of us maintained that it made the exhibition much more interesting, vital and stimulating, whereas the other protested that the only road to progress lay along the lines of a robust individuality that lets nothing of its strength be sapped by such encervating sensibility. On one point, however, we were quite in accord, viz., that we had thoroughly enjoyed the show.

CARINE AND WILL CADBY.



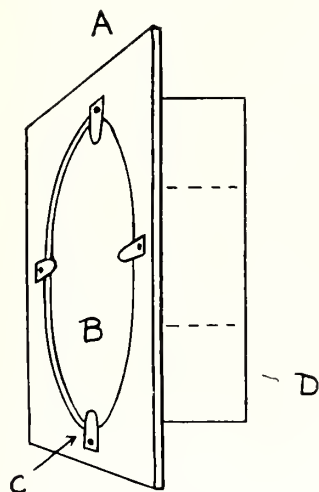
### To Photo-Era Readers

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect.



## Direct Enlargements With a Reading-Glass

THE amateur photographer need not feel handicapped for the lack of an enlarging-lens if he is the owner of an ordinary reading-glass. Of course, he must be the owner of a "bellows" camera with sufficient length to allow fine focusing, and a ground-glass for direct observation. Build a holder for the reading-lens out of cigar-box wood, or similar thin material, something after the pattern illustrated in the sketch. The size and exact shape are governed, of course, by the size of your reading-glass and the lens-barrel of your camera.



HOLDER FOR READING-GLASS

A represents the holder of thin wood. B is the circular opening, which is cut a trifle smaller than the diameter of the reading-glass itself. The brass clip, C, is one of four, placed equidistant about the circular opening, and is devised to hold the reading-lens in position over the opening. Next cut out a block of wood, D, somewhat smaller than A, and about one and a half inches thick. Bore a hole through the center of a size to fit snugly over the lens-barrel of your camera and screw firmly to the back of A so the two openings will be concentric. Blacken the entire holder, inside and out, with flat black and allow to dry several hours. Slip the reading-lens out of metal hand-holder and put in place under the brass clips on A. Push D over the camera-lens and focus upon some object to be directly enlarged. With proper manipulation you will be able to make clear negatives, with very little distortion, four to six times the size of the original.—L. B. ROBBINS.

## Change in Price of Aurora Life-Studies

THE well-known portfolio of Aurora Life-Studies, decorated plates measuring  $9\frac{1}{2}$  x 10 inches, comprising a total of sixty-three halftone reproductions, was sold at \$7.50 until lately. PHOTO-ERA has purchased the remaining copies of this publication and is now selling them at **\$5.00 net**, each.

The set of statuary poses, No. 300, composed of 12 6 x 10 direct photographic prints on heavy Azo paper, is now sold at \$4.00 net; but together with the portfolio of halftones, at **\$7.75**.

The above **\$7.75**, together with PHOTO-ERA for one year (\$2.00), total \$9.75, for **\$9.50**.

The print-sets B, D, E, F, G, H and I, each composed of 12 8 x 10 Aurora Life-Studies, semi-draped and in the nude, printed on heavy Azo paper; and print-sets A, C and O, each composed of 20 5 x 7 prints, like the preceding, continue at \$5.00 each. Any of these sets, with PHOTO-ERA for one year (\$2.00), for **\$6.50**.

Everything, except the PHOTO-ERA MAGAZINE is sent by express.

## Keeping the Background Plain

WHATEVER we select for the background, we must remember to arrange it in one of two ways. Either it must appear in the picture as a perfectly smooth tone, without any suggestions of detail or form, or else it must suggest or indicate its nature and form, in which case it must be the subject of careful attention. So many of the photographs which are made fail in this respect. It is evident from them that the photographer has hung up a sheet or some similar thing to serve as a plain background; but that then he has taken no further pains to get it plain. The consequence is that creases, or folds, or texture, or dirt marks, or one of the many things that ought not to show where all is to be plain, do show, and by the otherwise plain character of the background, they are specially conspicuous.

Therefore, we lay stress on the need to stretch the paper on card or on a board. It should be paper without any very pronounced grain. It should be sufficiently far behind the actual subject of the picture to be out of focus; although this should not be detected, as it should have no detail or other irregularity of surface to show whether it was in focus or not. It is sometimes possible to hide any irregularities by moving about the background during the exposure; but there is always a risk in so doing of moving the subject also.

The tone of the background need not be alike all over. It may be graduated so as to be lighter on one side than the other; and a very beautiful and even graduation may be obtained very simply by using a large enough background and bending it into a curve, so that one part catches the light more than another.

A somewhat similar set of considerations applies to the surface on which the subject is to be placed. Sometimes a long strip of card or paper can be used to support the subject and to come up behind it also and serve as the background; but it is generally more satisfactory to indicate both a horizontal and a vertical surface. In that case we get a horizontal line across the picture, where the background meets the "floor;" and it is well to have this far enough behind the object to be fuzzy. At the same time it should be straight, and there should not be any signs of an imperfect junction, such as we see when the roller of a rollable background is allowed to lie on the floor—a fault frequently noticeable in amateur portraiture.

On a small scale, we can deal very well with such a case by arranging the object on a sheet of card on the table, with a fair extent of card behind the object, ending in a straight clean edge. The background is supported separately a few inches behind this edge, and carried below it, so that the bottom of the background is not seen from the lens at all. It is difficult to explain why, but this method seems to give more relief or solidity to the object than most other methods; whatever it is we are photographing does not appear to have a background pushed close up against it.—*Photography*.

THE keynote of art is joy. No one can measure your joy nor estimate its quality. It is my duty to tell you that art is a necessary part of healthy human life; that there is nothing effeminate about it, nothing unhealthy, nothing ignoble.—W. MARTIN CONWAY.

## A Film-Pack Developing-Tank for the Amateur

It is a tedious and rather unsatisfactory task for the amateur to develop a film-pack. It means separate handling of each exposure with subsequent loss of time. The tank-method used by professionals is ideal, as it allows the exposures to be immersed in the developing-solution, which is contained in a large tank capable of holding several packs at one immersion. The large tanks, however, are expensive.

The tank described in the following paragraphs is easily constructed at home, and will develop twelve exposures at a time,  $3\frac{1}{4} \times 5\frac{1}{2}$  or smaller, with a minimum

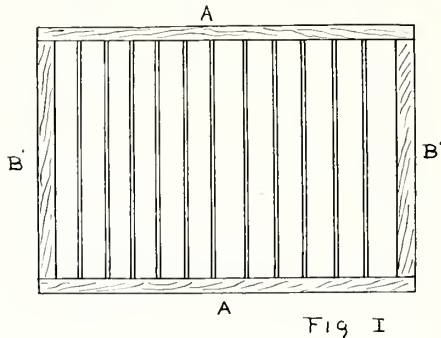


Fig. 1

amount of solution and no waste of time. It should be built of half-inch soft pine. The sides, A A' (Fig. 1), measure  $7 \times 4$  inches and the ends  $4\frac{1}{2} \times 4$  inches. Saw these perfectly square so as to ensure tight joints. Measure one quarter inch from one end of each of the shorter pieces, B B', and mark off eleven one-eighth-inch spaces, leaving one quarter inch between them. Line off these spaces with a try-square and saw them down to a depth of one eighth inch. In this way, eleven grooves one eighth inch deep are cut on one surface of each end piece of the tank. Smooth the grooves out with emery-paper and fit the four slides of the tank together, nailing the longer ones to the ends of the short

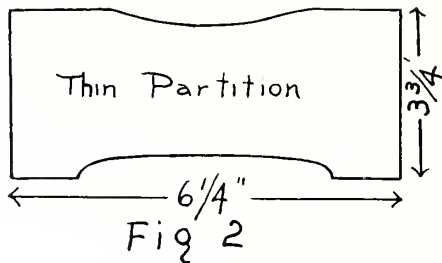
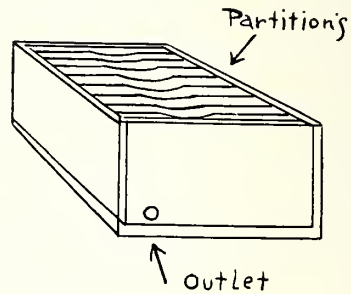


Fig. 2

ones. Be sure that the bottom edges come exactly flush with one another. Then nail on the bottom, which measures  $7 \times 5\frac{1}{2}$  inches. Use galvanized wire-nails throughout.

Now, get some cigar-box wood and cut out eleven partitions the size and shape of Fig. 2. Smooth up the edges with sand-paper and dip in melted paraffin—coating thoroughly all sides. Coat the inside of the tank with paraffin by means of a cloth-swab. Give two or three good coats and fill in the corners and cracks to prevent all leakage. Then bore a small hole in one end close to the bottom and fit with a stopper. The cover, C, should be made to fit fairly tight by padding the inside with felt, so that a little

pressure will be needed to fit it over the edge of the tank. Fill the tank with "twenty-minute" developer which will just cover the upper edges of the partitions and insert one film in each cell, dipping it sev-



eral times to cover the emulsion thoroughly. Then cover and leave the films to develop the required time. If the developer is bottled after each development, it will last the maximum amount of time, and will prove to be an exceedingly economical method to develop film-pack.

## Some Suggestions for Subjects

SUBJECTS for indoor-work are plentiful enough. There are flowers and fruit, some of which are always obtainable; grasses, seaweeds, and shells; arrangements of foliage and ferns; groups of china and glass; casts, pictures, coins and curios of various kinds. These do not exhaust the list by any means. A prize in one of the *Photography and Focus* competitions was taken some little time ago by a photograph of a few ordinary eggs on a table, and a very beautiful example it was of the power of photography to express form by the most delicate and exact gradations of light and shade. The particular subjects which happen to be chosen by any one reader will depend on his taste and on what lies to his hand; what follows is intended to be more or less general in its application.

First, then, as to the outfit. The chances are that the object chosen, whatever it may be, will be comparatively small; at any rate, if the camera is one which focuses by altering the separation between the lens and the plate, the subject will be so much nearer to the lens than in, say, landscape-work, that the camera-extension will be much greater than usual. For, as every photographer knows, we have to place the subject nearer to the camera to get it on a larger scale in the picture; and the nearer it is, the greater must be the separation between the lens and the plate to get a sharp picture.

Therefore, with such a focusing-camera it may be well before starting the work to see on how large a scale we can get the image, and we do this by racking out the lens as far as it will go, and then focusing on the ground-glass by moving the camera to and from the subject, keeping it fully extended all the time. If the camera has only what is called a "single extension," we may find that three or four feet is about as near as we can have the subject, but if it has "double extension," still more if it has "triple extension," we may have the subject as near as a foot or less, and may get an image on the same scale as the original, or perhaps a little larger.—*Photography.*

THE laws of morality are also the laws of art.

ROBERT SCHUMANN.





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A. H. BEARDSLEY, Assistant-Editor

KATHERINE BINGHAM, Editor, Monthly Competitions

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WOOD INTERIOR  
THEODORE EITEL





# PHOTO-ERA

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## The Camera in Camp

CHARLES M. MANSFIELD



FROM the first light fall of snow which comes with November, until the breaking of the swollen bud into the full leaf in the month of months, the hearts of the many hundreds of those who love the smell of camp-smoke and who delight to hear the soft click of the camera's shutter are calling—"Come on, June!" And now June has come and gone, and has left behind filmy records of how a part of it was spent with camera and me. There are many joys in camping; but of them all, what is greater than the joy of recording the scenes, the work and the play of the camp by day and by night? No man should sleep under canvas who has not included in his camp-outfit a camera or kodak. It matters not if it is a Brownie or a high-grade Graflex—just so that it will record photographically events and scenes of a camping-vacation.

Now when it comes to the best camera, or kodak if you like, to take to camp—there "ain't none." Every man is a crank on a certain equipment, and in my case I obtained the best results with a 5 x 7 view-camera with an extra long bellows fitted with an anastigmat-lens. A camera of this type will withstand a great amount of rough handling and is inexpensive. I have carried such a camera many thousands of miles into the northern woods of Canada, down into the Everglades of Florida, across mountains, on my back, in baggage and freight-cars, in canoes and on the backs of pack-animals, and the most harm that has ever happened to it has been the breaking of a couple of ground-glasses. Since I have installed a sheet of ground-celluloid nothing untoward has happened. Such an outfit is heavy I will admit; but when a fellow wants real photographic records of a trip—pictures that he can show his friends, and when telling about them live over his trip many times—then he should take a real view-camera, a reliable grade of plates, a ray-screen, pack them

all in a suit-case, with a folding-candle ruby lamp, and sally forth confident of returning with results. If one wishes to lighten his burden, there is now to be had in the market a cut photographic film which will prove a blessing to those who still wish to see the image on the ground-glass. This possesses about all the qualities of a plate, has only about one-tenth the weight and takes up about one-tenth the space. It is non-halation and possesses a fair amount of color-sensitiveness. Such qualities are truly worth considering when making up a camp photographic outfit. A word about a tripod. What has been said about the weighty camera holds good with the tripod. Do not expect to get real results with a light, wiggly camera-support. I have a tripod which is made of ash with good heavy re-enforcements. Although large and cumbersome in some respects, it proves its worth when put into action. This tripod fits in the suit-case with the outfit.

On the way to your proposed camp-site, you will probably see several views that you think worth while, so that you will wish to hold up the party, or stop the canoe, or, if in a machine, go into reverse, just to get—much to the discomfort of others—a picture. For this particular purpose I carry a vest-pocket camera, and if I get a real picture, I enlarge it, tone it to a sepia and present it to the discomfited ones. After the camp-site has been selected, take a stroll and look around. It has been said that some of the best pictures have been obtained by famous artists when they looked backwards. Try it! If you want real atmosphere, soft distant tones to your pictures, make your exposures early in the morning or late in the afternoon, never during mid-day, when the light is strong and the shadows harsh. Black shadows and chalky whites do not tell stories—they are photographic nightmares! In the evening, when the lights are soft and the winds low, steal out and make a few exposures. The vegetation is quiet,



ALONG THE JAMES RIVER IN OLD VIRGINIA

CHARLES M. MANSFIELD

you are not bothered with wind-blown branches or dancing twigs, the scale of tone-graduations will be well marked. Too, with a good orthochromatic non-halation plate you will be able to obtain color-value in your various shades and tones. By studying your composition, and rendering correct tones to your colors, you will obtain very pleasing photographs of out-of-doors which will tell stories of your camping-vacation.

The question of exposures will be governed by the light, stop and subject, just as in other conditions surrounding exposures. Most photographers have worked with success under the direction of exposure-meters, others judge by the image on the ground-glass, still others guess at it and many times the finished print spells failure. You cannot guess at an exposure unless you have some mental recollection of previous successful exposures under like conditions.

It has been noticed that certain kinds of foliage lend themselves to photographic possibilities better than others. This is why certain plates are superior to others. Take, for instance, the willow-trees. These trees, almost always, appear black in a finished print, due to the fact that they have so little blue in their green, and on the other hand a spruce or a juniper will take on a lighter shade, due to the great amount of blue in their respective greens. I have made photographs on single-coated plates without a screen and the

entire mass of foliage would be monochromatic. By repeating the exposure and using an ortho plate and ray-screen, a botanist would be able to pick out eighty-percent of the trees. This is one of the important points in out-of-door photography, the recognition of the significance of the proper plates to use. This is what gives personality — the differentiation of tones.

The subject of halation is very important when making out-of-door pictures. The landscape-photographer has to guard against halation which appears as strong light around the edges of trees and openings. This difficulty may be overcome easily by using a good non-halation plate, or by backing a plate with some opaque substance. On one occasion I could not obtain non-halation plates; but I purchased from a pharmacist a small amount of fuchsine — a red-coloring matter — moistened this with a small amount of soap-solution and alcohol, and with the mixture coated the backs of the plates. This overcame the halation. The preparation may be rubbed off with a bit of moistened cotton.

Protection against humidity is an important factor when camping. Ninety percent of camps are located around rivers and lakes, where moisture runs rampant; and unless some precautions are taken, sensitive photographic material is sure to be ruined. It has been found that if roll-films are placed in tin-tubes, and the tops sealed





THE ANGLER'S GAME  
IN THE WILDS OF ALGONQUIN PARK

CHARLES M. MANSFIELD



on with a piece of tire-tape, these tubes may be exposed to much moisture and semi-tropical humidity without deterioration. One of the largest film-manufacturers supplies these tubed films at request. As a protection for plates and sheet-film against humidity, most any tinsmith will make — for a small outlay — a tin-box of a size to hold three or four dozen plates. The box should have a tight-fitting lid, which may be sealed with adhesive-tape. Such a box, when properly made and sealed, may be dropped into the river without the least fear of wetting its contents. On one well-remembered occasion I dropped my photographic outfit into the Potomac River. A hurried rescue was made of the camera, plate-holders, etc.; but it was some time before I realized the fact that I had not recovered the tin-box containing the plates. After some difficulty this was brought to the surface. Thanks to the tightness of this plate-container, it saved just four dozen plates. As for the plateholders in camp, a rubber-coated carrying-bag, ample in size to carry six holders, will be found very useful, as it is both light- and water-proof. Such a bag may be made to have double sides, one for the non-exposed and the other for the exposed holders. The camera should be wrapped at all times in the focusing-cloth — when not in the carrying-case. The dampness during dewy nights will soften the cement and cause the bellows to break and leak. After a plate has been removed from its original package, and given a bath of warm atmosphere — such as usu-

ally exists around summer-camps along damp river-banks, lakes or rivers, by the salty sea-side or the cold damp night-atmosphere of the mountains — this sensitive gelatin-emulsion, which has absorbed moisture, is packed back into a paste-board-box with possibly the unprotected gelatin-surface face to face with another plate. Then it is transported several days and many miles in a

hot trunk before reaching home, consequently, what happens? Any photographer will give the answer — so use care in repacking your exposed plates. Remember to return them — properly numbered for further identification — to their respective boxes, as originally packed, and do not forget to use the little bits of cardboard which gave protection to the emulsion-sides.

One of the most important, yet one of the most neglected, adjuncts of out-of-door photography is that of keeping records of exposures and the conditions during the exposure. These are vital when you reach home and

start to develop. To enter a darkroom without some record of the exposure of the plate or film you are about to develop is to be avoided. There are numerous booklets on the market in which simple exposure-records may be kept, or even a cheap vest-pocket note-book may be purchased for a few cents in which ruled lines may be portioned off under proper entry-heads. Some of these are: number of plateholder, duration of exposure, condition of light, stop, plate, brief description of subject, etc. Records such as these are helpful during development and interesting



THE PROOF OF THE STORY

CHARLES M. MANSFIELD





AN ABANDONED LUMBER-CAMP

CHARLES M. MANSFIELD

to study with the finished print before you. They offer an opportunity to check up the results.

It is rarely that one attempts to develop exposures in camp. The main reason is that one is out to enjoy a vacation and not that one is trying to avoid the many inconveniences which would be encountered if an attempt were made to finish a print under canvas. Of course, it can be done; nothing is considered impossible in this day! The developing-tank, the babbling brook in which to wash the film, the magnesium-ribbon to print by, tree-trunks on which to pin drying prints and many other shifts, which would leave nothing to anticipate on arriving home. The joy of the home-coming to me is to see the image developing under the rays of a ruby light in my own little darkroom down in the basement. The press-photographer who is always in a hurry will complete a picture under the most difficult conditions, but this is done simply to speed up results to feed the eager news-hungry public; but the amateur who loves the result, and who will travel many miles to get a picture, will not leave his creation to wash in a babbling brook, or to dry where gnats and woolly bugs run rife as they do in summer-camps. If you happen to suspect any part of your outfit, it is well sometimes to make a trial-exposure and develop it on the spot; but this is done only in an emergency or to check

against future failures under similar conditions.

The question of developers is an individual matter. For a while the fad was pyro and soda, then it shifted to pyro and glycin, then again everybody — with the exception of a few fogies — used some form of metol; the war came and any old thing would do. But what's the use of discussing developers? Many photographers have their own favorite preparations; those who do not, let the fellow around the corner develop for them. Nevertheless, we all get results; and the results depend on one thing — remembering the exposure before beginning to develop.

The illustrations that accompany this article are such that almost any camper should be able to obtain. They are graphic, and contain sufficient human interest to make them worth while to show to the folks at home. Aside from the fact that they are pictures made in the land of your camp, they are records of events made during the most interesting period of the year — vacation-time. I have pictures made of many camps in various lands and of many camp-companions now scattered to the four winds. Every now and then, when the quiet moments come — as they do to all of us — I bring forth my camp-album "of the good old times," and five over in memory those happy, priceless days of camps, cameras and companions.

# Against-the-Light Effects

WILLIAM S. DAVIS



NE of the never-failing charms for students of the pictorial is the unexpected "effect" occurring constantly on every hand as a result of variations in quality and direction of the light which illuminates the scene. As indicated by the title, the type of effect under immediate consideration is the one caused by the main source of illumination being in front of the observer. Without wishing to convey the impression that any given variety of lighting produces the most attractive results, I am certainly safe in saying that very many magnificent pictures — covering a wide range of subject-matter — have been produced by working against the light. Every one will naturally think of sunsets as bright and shining examples — this is n't a pun — also window-studies indoors; but in addition to such obvious phases, thoughtful attention will reveal the influence, in many instances, where the source of illumination is made evident only by the formation of the shadows.

One of the main advantages of working with the light in front of the lens is the simplification of detail and the broader tone-spotting usually obtained, this being very pronounced, even when the sun is high. Indeed, with the sun in such a position it is almost impossible to obtain a fair proportion of shadows in an open landscape unless the camera is turned toward the light.

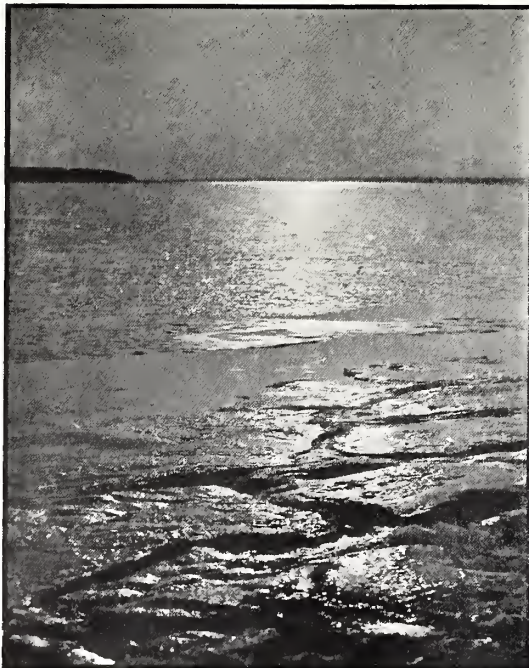
Since facing the light naturally has the effect of bringing the shadow-side of all vertical objects toward the spectator, this can frequently be taken advantage of to make more prominent certain foreground-material when the latter is shown against a stretch of evenly lighted flat-landscape, or other open expanse, be-

yond. Under these conditions even a clump of tall grasses may play an important part, and examples are met with constantly wherein one or more tree-trunks stand boldly outlined against a sunlit meadow or bright sky. In open-landscape compositions entire tree-groups are often represented in low tones with a glowing-sunset sky for a background, though the latter is by no means an essential adjunct, since any sky-effect possessing satisfactory modulation of tone serves the purpose. Some of the most powerful subjects of this character are built up by keeping the sky-line of foliage or hillside fairly low in the picture-space and giving over the remaining area to a striking massing of cumulous cloud-forms, which in nature sweep by so frequently and grandly on a windy day. In all such pictures, however, an effective line-arrangement of the silhouette-like masses is absolutely needful to a successful result.

Some wonderfully fine effects are seen in the woods on sunny days, as one faces the light. Gnarled trees loom up in all their might, and the luminous quality of tender foliage is brought out to a marked degree — especially, if the atmosphere is softened by haze or fog. The latter conditions

are ideal for making photographic studies, since, by taking reasonable care in the selection of subject-matter, it is possible to avoid a distracting "spotty" quality and yet introduce an interesting variety of tonal gradation.

The importance of cast shadows as a pictorial asset can hardly be over-estimated, and these are most prominent when the sun is rather low. Working against the sun during the early morning or late afternoon, and with a moderately clear foreground, one may obtain unique and beautiful pictures showing little else than the



SUNLIT ICE

WILLIAM S. DAVIS





THE FERRY-SLIP

WILLIAM S. DAVIS

shadow-patterns cast toward the observer. If you are not prepared to go so far, the shadows may at least be used to make an interesting foreground which will also lead the eye into the composition. Snow-scenes in particular furnish excellent material for such treatment.

Front lighting is often well suited to figure- and animal-studies, producing what in studio-work is usually called "line-lighting"—since the contours of objects are emphasized by a line of light on the side nearest the source of illumination. The attractiveness of these effects depends largely on the skill with which the transparent shadow-tones are preserved—which impart a luminous quality to the entire picture—together with the attractive shapes of the light-outlines. "In Quiet Pastures" indicates some, but by no means all, of the possibilities when animals are the subjects. In choosing a composition under these conditions, particular attention should be given to the background. As a general rule, it is difficult to obtain the desired quality if the subject comes directly against a clear sky, as the contrast is apt to exaggerate the apparent strength of tone of nearby shadows, this being true especially with reference to relative values of flesh-tones in shadow. A mass of thick foliage often provides a good dark background, or if one of lighter tone is desirable, a sloping hillside, distant woods, a garden-wall, etc., offer interesting possibilities. The essential point is to obtain

enough differentiation between background and shadows of near parts so as to make the tone-spotting of the picture pleasing, and, at the same time, to avoid excessive contrast.

To those familiar with marine-subjects, it is scarcely necessary to mention the interesting tonal contrasts brought out by pointing the camera toward the sun, and one may well risk having a fogged negative occasionally for the sake of catching the gem-like sparkle upon the waves, or a striking mass of dark rocks or shipping against the sky. A very beautiful sheen is in evidence, too, when sunshine falls upon a sheet of ice—whether a frozen harbor or merely a small pool in a landscape. Some of the best sunshine-effects on water are obtained when the sun is high enough to be out of range of the lens, and in such a case there is much less chance of fog or an undesirable amount of halation. When one wishes to show the sun, it is safer to wait until the full intensity of its rays is subdued by a light cloud or haze. As an example, the accompanying picture, "The Lightship," was taken late in the afternoon as the sun was sinking into a bank of mist, which diffused the light in a satisfactory manner. In a finished warm-toned print, the picture really suggests the glow of sunshine far more than if the image of the sun were perfectly sharp. On the other hand, "The Ferry-slip" illustrates an effect obtained near noon upon a bright August day, which would be considered

ordinarily about the most unsuitable time for pictorial work — but the only thing to do when one sees what is wanted is to take it and let rules go to smash if necessary. In this instance the composition has been simplified virtually to a flat poster-design for the purpose of strengthening the impression — accomplished by keeping the shadows of the negative thin, and printing more deeply than normally required.

Indoors one may arrange many unusual and striking combinations of light and shadow — including even silhouettes — and not only figures but flowers and various still-life groups make excellent material. Usually the light — particularly if the window happens to be on the sunny side — had better be diffused, otherwise the intensity of contrasts on a bright day may prove beyond control. If thin sash-curtains do not soften the light enough, one or more thicknesses of common white “cheese-cloth” will regulate the degree of diffusion, and the effect may be still further altered according to whether the entire window or only a portion is covered. The ultimate effect on the subject is varied greatly by making slight changes in the relative position of subject-matter to the source of light.

One method — mentioned in my article upon “Nature-Studies With a Camera,” in February PHOTO-ERA — is to use a high source of light, such as the upper portion of a good-sized window, place the background directly below and the subject a few feet in front. By moving the group backward or forward, the angle of illumination changes quickly, thus permitting full control over the placing and strength of the high-light accents. If the top-lighting does not give the par-



THE LIGHTSHIP

WILLIAM S. DAVIS

ticular quality wanted, a side “line-lighting” is readily obtained by using a lower source of light and by placing background and subject just to one side of the window. Whichever method is followed it should be noted that very light-toned backgrounds are most desirable, since being

wholly in shadow the background will in any case appear quite dark by contrast with the lighted parts of the subject. For small-sized groups of flowers or still-life arrangements, I generally use pale shades of mounting-paper, or ordinary cream “pulp-boards,” and under some conditions find that pure white will reproduce dark enough when studies of flowers with translucent petals are made under the conditions named. A more pronounced effect is obtained by arranging the subject directly in front of a window, using the casing of the latter to frame in the composition, or showing only a part, according to the purpose in mind. This form of lighting produces a pleasing differentiation in the rendering of opaque against semi-transparent details, such as the play of light through



CHINESE LILIES

WILLIAM S. DAVIS



folds of thin drapery, or the contrast between delicate flower-petals and the more opaque stems and leaves. "Chinese Lilies" is an example of such treatment, the growing flowers being placed before a window covered with several layers of "cheese-cloth," arranged loosely to suggest the natural folds of an ordinary curtain.

On the technical side the main consideration is to avoid various forms of light-fog, and to so expose and develop the negatives that the scale of tones presented is brought within printable limits. As regards the first, the best safeguard is to employ a properly fitted lens-hood to keep off all light outside the rays included by the working view-angle. Various styles are available, the simplest being a tube fitting snugly over the lens-mount, or a strip of flexible black

haze, in which case little difficulty will be experienced. As a rule, whatever blurring may occur in the image of the sun is rather a help in conveying the desired impression of brightness. In landscape-work, it is often possible to interpose some solid object—like a tree-branch—between the lens and sun without in any way losing the effect of the latter.

Flare-spots, which manifest themselves as ill-defined spots and circles in the finished negative, are due to internal reflections between the component parts of the lens, and for this reason uncemented air-space types of anastigmats are more subject to the defect than those fully cemented, or simpler lenses of the single-achromatic or rapid-rectilinear form. Backed, or double-coated, plates will take care of the long



IN QUIET PASTURES

WILLIAM S. DAVIS

material which can be rolled around the lens and held in place by a strong rubber-band. The latter has the advantage of fitting different-sized lenses, or ray-filters, thus avoiding the necessity of having a hood for each. The length of the hood is determined best by removing the focusing-screen and looking through the open lens with the eye at one corner of the camera-back. If the end of the hood is then visible, it must be trimmed down to avoid loss of illumination on the negative; but it is advantageous to have the shade as long as possible.

When the sun, or a powerful artificial light, is included within the field-of-view, real troubles in the way of fog and flare-spots are most likely to make their appearance in the negative unless the intensity of the light is softened by clouds or

scale of tones commonly present, unless films are preferred instead—either being satisfactory.

The employment of a ray-filter is generally a decided advantage if the subject is such as to permit a full exposure. Aside from correct color-translation, I consider a deep filter—say from five to eight times—a help to hold in check the lighter parts. Always give a *full* exposure when working against the light—anywhere from twice to four or five times as long as on similar subjects lighted from one side. By so doing, the shadow-tones have a chance to appear before the highlights of the negative are overdeveloped, which is never the case when an undertimed negative is forced.

If development is done by the tray-method, dilute the developer to about one-half the usual

strength, and let the finished negatives appear rather thin. A method which works well when dealing with strong contrasts is to lessen the proportion of reducing-agent, and add enough bromide to prevent chemical fog — the result, with full exposure, being a clear, soft negative showing a very full scale of tones. The average pyro-formula, thus modified, works out in about the following proportions:

|                               |               |
|-------------------------------|---------------|
| Water .....                   | 6 to 8 ounces |
| Sodium sulphite (dried) ..... | 80 grains     |
| Sodium carbonate (dried) ...  | 30 grains     |
| Pyro .....                    | 4 grains      |
| 10% bromide potass. solution  | 5 to 10 drops |

The amount of bromide necessary depends on

the fulness of the exposure and the working-quality of the plates or films employed.

[The reference to flare-spots, page 277, is true to a certain extent; but the fact remains that the modern cemented and uncemented anastigmat lenses are remarkably free of flare and coma. There have been cases where a cemented anastigmat used for night-photography has developed greater flare-spots and circles than an uncemented lens. With the best lens there is always a possibility that internal reflections may appear under certain conditions. It would be well for photographers to emulate the motion-picture cameraman, who employs a sunshade, and thus obtains the marvelous against-the-light effects so much admired in the big feature-plays.—EDITOR.]

## Bromide Enlargements for Light Subjects

WILL CADBY

**I** AM so glad to meet you," said a fair visitor to me once in Switzerland, "because I owe you a grudge. I bought one of your child-studies at the Salon, last year, on purpose to see how it was done, and when I took it out of its frame all I found was an ordinary little bromide!"

This incident, besides being literally true, is to a very great extent illustrative of my light-toned photographs; for, alas, I have virtually no secrets to unfold as to how they are done, and I see no reason why photographers with a leaning towards this kind of work should have any difficulty to produce similar results if they follow the simple hints given below.

To begin with, then, no dodges with the bromide-paper or cunning manipulation of the negative will avail by themselves. We must go further back and, first of all, study very carefully both the *lighting* and the *subject*. If we are set on a delicate child-study, it is useless to place our model in a contrasty lighting. The deep shadows of such an effect cannot even by excessive alteration of negative or print be made to suggest delicacy with any truth. In the same way a snow-scene, ranging from distant sun-lighted snow to near-black fir-trees, will never give a dainty light-effect. It simply cannot be done, and it seems hardly necessary to waste space in setting forth the very obvious reasons, since I am writing for experienced photographers.

So we choose a subject in which the *scale of gradation* is short, that is to say, we avoid dark

shadows altogether. If we are aiming at a light child-study, this may be achieved in two ways: first, by a flat light, and second, by surroundings and clothes. Any room that has one fairly large window and no top light will serve the purpose. I have classed the clothes and surroundings together, as they have a similar effect on the results. Personally, I always work with a white background and white foreground, and insist on light, neutral-colored clothes. I remember, in the early days, my difficulties over black shoes and dark stockings when I wanted my model full length. They would simply ruin the light-scheme, and my only way out of this *impasse* was to do away with them altogether and let the model have bare legs.

But what has all this to do with bromide-printing thinks the reader, naturally becoming somewhat impatient. Well, this much: that a delicate bromide-print is like the result of a long-division sum, for it refuses to work out correctly if there has been a mistake at the beginning; and black shoes, if not a downright mistake, would yet constitute such a serious handicap, that I, for one, could not possibly get my result satisfactorily correct if I started out with it.

We have now considered the main requisites for our work indoors; but, before discussing the quality of the negative that should be made, let us bring our snow-picture up to a similar stage. Here the advice given earlier in these notes holds good. We must turn our backs on dramatic effects that range from darkest blacks to dazzling whites; they are not suitable for delicate work,





IMPORTANT BUSINESS

WILL CADBY

and again we must be content with a short scale. There is no necessity to go to Switzerland for such subjects. "April Snow" was taken in a Kentish wood and, perhaps, illustrates more clearly than many words what is meant by a short scale of gradation. Here we have no deep shadows. The tones range from white paper to the gray of the tree-trunks, on which falls, where the sun has in places touched the snow, very useful reflected light from the white ground.

And now we arrive at the question of the nega-

tive. In both cases this must be very fully exposed and softly developed. I do not wish to imply that we are to aim at a flat, foggy negative; far from it. But we require one, every part of which can be seen through when looked at against the light. There must be no clear-glass shadows or over-dense highlights. Owing to the nature of the snow-negative, it should obviously be a little stronger than the child's indoor-portrait, but otherwise I develop them all exactly the same.

This brings us to the very important subject,

from the point of view of delicate work, of printing; and perhaps it would be as well to state here that I always develop these negatives with the sole idea of making prints by means of bromide-enlargements; and I have no desire to disguise the fact that negatives so made are not ideal for direct printing in p.o.p. or even platinum, and are obviously useless for carbon-work. The reader may very reasonably be wondering why I deliberately develop the negative so as to make enlarging on bromide-paper its only ultimate means of expression. The answer is that, from a lengthy experience and practice in attempting delicate effects, I have found that by making the sort of negative just described and *enlarging* on bromide-paper, I thus get nearest to what I am aiming at. Of direct bromide-printing I know practically nothing, never having attempted to obtain artistic effects in that way. It is probable that quite as satisfactory results might be got if the same amount of care and trouble were bestowed on it that I give to the enlargements, but mechanical reasons (which I will explain directly) would make the process more difficult.

But now as to treatment. If the negative to be enlarged from is of the quality described a little further back, I use the slow variety of the Smooth Platino-Matte, working with the Kodak Special Concentrated Developer, diluted according to the printed directions, which I follow implicitly until I come to the order to wash in three or four changes of water before fixing. If I remained faithful to the Kodak rules in this particular, it is to be feared I should never achieve a delicate print, for like many others I have formed the habit of fully exposing and not developing up to the hilt. This means that the print must be washed very hastily and immersed at once in the hypo, just as it reaches what is considered the right quality. I am well aware that Kodak experts consider this most heretical behavior, and one is threatened with a purgatory of stains and partly destroyed image. But the fact remains that I have Kodak bromides which have been exposed to the light for many years, and which are stainless and fadeless, although they were brought into existence in the unorthodox manner just described.

But suppose that for some reason or other the negative is strong, and yet it is necessary to make a fairly delicate print from it; then I use the fast variety of paper and dilute the developer sometimes to one in four of water compared with the normal. This makes the process a slow and tedious one, of course, and the color of the print may be impaired. But we have considered an extreme case, and, generally speaking, the difference in the quality of negatives can be rectified

by using the fast paper with the developer half normal strength.

When we come to the matter of control in printing, we realize the advantage we have in manipulating a comparatively large picture compared with the small one in a printing-frame. Some slight masking is generally necessary with light subjects, and a cardboard-shade, roughly cut to the shape required, can be kept continually moving in and out of the picture during the short time a daylight-exposure through the camera takes. Unlike our case when working with a printing frame, we can see exactly what we are masking, for the image is thrown clear on the bromide-paper. I have often slightly lightened a face that printed too dark if left to itself, by fixing a disk of paper at the point of a hat-pin, and for a fraction of the whole exposure masking the face with it, being careful to keep the pin moving so that the shadow cast by it should not show.

With such delicate subjects, whose darkest shadows are represented by a light gray, any imperfections in the paper itself would be terribly apparent and spell disaster. With Kodak bromide, however, we need not fear, for it is singularly free of blemishes or black spots. Even if the uninitiated may regard it almost contemptuously, like the lady of the Swiss mountains, considering it rather as the Cinderella of the printing-processes, yet for delicate work it has no rival. After all, the camera, with its sureness of touch, can draw for us with silver-point fineness and delicacy — and here is waiting a pure-white paper with a beautiful matte surface, and it is up to us to use it pictorially.

*From "Kodak Bromide Pictures."*

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THERE is no doubt that the old masters were excellent craftsmen — better, perhaps, than the masters of to-day. They wrought with knowledge and taste, as well as with sincerity; and it was their grasp of craftsmanship, their ability to execute as well as to plan, that made possible the splendid art of the Renaissance. This is, indeed, a noble and not an impossible standard for photopictorialists to attain. Some are doing it, and many more should follow. Those old artists did not always live in peaceful times, and it was often trials and privation, not ease and opulence, that stimulated their desire for higher emotional expression; so that impending danger of our domestic peace — yes, national disaster, itself — will tend to awaken our slumbering muse, who will lead us to better and nobler things in artistic performance. — W. A. F.



# Burson Goes Into Business

MICHAEL GROSS



BURSON liked Art Condit as soon as he saw him. That was rather strange, for they first met in the waiting-room of a photo-studio, where, in answer to an advertisement for an assistant, Burson had called — to find Art, his only rival for the position, already there. But instead of the scowl with which job-seekers usually greet a new arrival, Burson received a warm smile, and he noticed that room had been made for him on the settee. In the interval that elapsed before the proprietor was ready to interview applicants, Burson had ample time to study his companion, and found his first favorable impression confirmed.

His rival, Burson decided mentally, was about twenty-five years of age. He was a well-built youth, with a frank and open countenance, good-natured eyes and lips that seemed continually on the verge of breaking into a smile. For the rest, Burson noticed that he was neatly dressed and possessed an air of quiet dignity. In short, he was the kind of fellow whom Burson felt instinctively that he could like. So strong was this feeling that when — after a long wait — his companion was asked to step inside, Burson, though needing the position sadly, found himself wishing that this fellow, whom he did not even know by name, would be given the preference.

But in a few minutes the interview was over, his rival had returned and Burson was asked to step in. The requirements of the position were explained to him, but they were such that Burson confessed frankly he could not meet, and he walked back into the waiting-room again. Art was still there, and somehow, feeling as if they had been friends for years, Burson told him all that had occurred. They walked out together, and before a quarter of an hour had elapsed were calling each other by their first names. They parted a little later with the understanding that they were to meet the next morning to hunt the elusive "job" together.

It was after two more weeks of unsuccessful searching for a position that the great idea came to Art. "Here we are," he said to Burson, at the end of a particularly dreary and resultless day, "two big, husky fellows" — Burson stood five feet, five inches, and was built like a jockey, but Art knew that he liked to be called husky — "trying our best to find some one willing to make a profit by exploiting the result of our labor."

"What's the matter, Art?" Burson laughed;

"been listening to a socialist-orator hammering the capitalists?"

"No, I haven't," Art said earnestly; "but what I mean is this. As long as we are willing to work we ought to get the profit from our efforts. Why can't we go into business for ourselves? We know the game well, and the little I've saved is just enough to give us a start. I'll finance the thing and you can pay me back your share as we go along."

As a result of this conversation, had you been passing 40 Elm Street any time within the next two weeks, your attention, no doubt, would have been attracted to a little sign hanging above the weather-beaten door, reading — "BURSON AND CONDIT. SPECIALISTS IN PHOTOGRAPHY." If your curiosity in seeing such an announcement on a tenement-house was strong enough to make you climb the three flights of creaky, dilapidated stairs to the top floor, you would there have discovered both members of the firm, busy with saw and hammer, building benches and other home-made furniture.

Finally, one Monday morning, the studio — if the two little rooms could be so flatteringly designated — was all fitted up. Art and Burson, standing in the middle of the large room — the small one, built originally for a bed-chamber, had been converted into a darkroom — expressed themselves as being well pleased with their labors, and vowed that if they did n't own a six-story concrete building within a year, it would n't be because they were afraid to work. Then they shook hands solemnly on the pledge and went out, Burson locking the door reverently behind them.

"Where are you going to start?" Burson asked as they reached the street.

"I think I'll call on an acquaintance of mine, who makes cider and vinegar," Art answered, "and see if I can't coax a little business out of him."

"Guess I'll try to rustle up an order myself," Burson said; and wishing each other luck, the partners went off in opposite directions.

A ten-minute walk brought Art to the office of the Acme Cider and Vinegar Company, and, entering, he asked to see Mr. Simcox, the president of the concern. The girl, who took his name, came back with the news that he could go right in, and Art walked down the aisle to the president's office.

Mr. Simcox, who knew Art when he was em-



WAITING FOR THE LAST BOAT

CHARLES G. WELLS

ployed with a local photographer, greeted him warmly and, on being told of the new "Burson and Condit Company," said that he had some work to be done and would gladly give the "company" a chance at it. He pressed a buzzer on his desk and said to the boy who answered: "Bring me a quart and pint bottle of our new grape-juice."

"This is one of our latest products," Mr. Simcox told Art, when the boy handed him the bottles a few moments later. "We call it Acme Grape-Juice. It comes in two sizes, pints and quarts, and I want a good photograph of each size. Do you think you boys can make two good pictures for me?"

Art's smile must have been more expressive than words, for Mr. Simcox, without waiting for an answer, called the boy in again and ordered that the bottles be wrapped up. However, when he handed Art the package, a sudden thought came into his mind. "Golly! I'm certainly glad I remembered this thing before you had gone," he exclaimed, "or I'd have given you unintentionally a whole lot of trouble on this order."

"What's the matter? Wrong bottles?" Art inquired.

"No; worse than that," Mr. Simcox answered;

"I've given you something to reproduce that you'd find it hard to reproduce satisfactorily. You see," he went on, "grape-juice is virtually opaque and, when photographed, gives you just a black mass, with no highlights, unless you fake them in by hand, which I don't want you to do. Now, you just wait a minute, and I'll have the boy empty the grape-juice out of these bottles and fill them with light vinegar instead. Then you'll get a good photograph, because vinegar, though virtually the same color as grape-juice, is transparent, and it will enable you to get natural highlights and shadows in your photograph."

Art gave the bottles back to the boy and waited until they were refilled. Then, highly elated at having received his first order so quickly, he hurried back to the studio. In order to keep the vinegar cold, he filled a basin full of water and laid the bottles in it so that only the necks protruded; after which he went down to buy some plates.

Burson had not been idle, in the meanwhile. He remembered having called on two lady-artists — as he termed them — at the time that he worked in the "Pyro-Prison." Since they had occasionally paintings to be photographed, he



decided to pay them a visit and solicit their business. Fortunately, they were both in when he arrived, and Burson, knowing what price they were in the habit of paying for photographs, quoted one a trifle lower. He explained the reduction by the fact that he was now in business for himself, and low overhead expenses, and was satisfied with less profit than a big concern. He became so enthusiastic about the little studio and what facilities they had to do excellent work, that the ladies expressed a desire to see the place.

Nothing could have pleased Burson more. He immediately extended an invitation, and the ladies, having nothing better to do at the moment, accepted promptly. A half hour later found them climbing the three flights of stairs leading to the studio, with Burson leading the way. He threw open the door to let his guests pass in first, and the chorus of "Ahs" and "Ohs" that floated back to him were as balm to his soul.

"Fitted up nice and comfy, is n't it?" he asked beamingly.

"My, but it surely is," one of his guests remarked enthusiastically; "it's a regular darling of a place. Such an odd location, too; in a tenement-house. Real Bohemian, I call it."

The long climb had made Burson thirsty, and he felt instinctively that his visitors must be thirsty, too. He wondered if it would be right to excuse himself for a moment and go down for some liquid refreshments. Just at this moment he happened to glance at the table and noticed the two bottles in the basin. He edged over and heaved a prayer of thanks as he saw the labels. "Acme Grape-Juice," they read, "a Delicious Thirst-Quenching Beverage." "Good old Art," Burson thought to himself; "he's a regular partner, Lord bless him. He must have anticipated that there was a possibility of my bringing a customer up here and he provided refreshments accordingly. Who could n't get along with a thoughtful fellow like that?" To his guests he said, with a sweep of his hands toward the bottles: "No doubt you are tired after the long walk upstairs. May I offer you a glass of nice, cold grape-juice? We always manage to have a little refreshment on hand," he went on airily, "although, as you may see, we have to revert to ancient methods of refrigeration to keep it cool."

The ladies said they would be delighted to partake of the beverage, and Burson started to search for glasses. He found two, and handed one to each of his guests. For himself he took an eight-ounce graduate, saying as he did so, "I'm used to roughing it, you know, and, besides, the ounce or two of potassium-cyanide that this

graduate might contain won't hurt me."

He opened one of the bottles, filled the two glasses brimful and then poured out eight ounces for himself. One of the ladies, in a few well-chosen words, wished Burson luck in his new venture, after which they all raised their glasses to their lips. Suddenly the door opened and Art came walking in. Grasping the situation at a glance, he jumped forward with a restraining gesture. But Burson, misunderstanding his intention, said with a laugh, "You'll have to wait for your drink until we're through, Art; there are no more glasses"—and with the words he took a long, deep drink of the cool liquid, the ladies following after him.

There was a moment's intense silence—while the acid-sour vinegar went down. Then the unfortunate trio started sputtering, retching, coughing and wheezing. One of the ladies gasped out that she had been poisoned, at which the other paused from her sputtering and clutched at her heart spasmodically, to see if it were still beating.

Art tried to explain the circumstances to them, but found himself roughly thrust to one side, as the lady-artists shot by him, out of the door and down the stairs. Then Burson, seeing his newly acquired customers thus deserting him, tried to gasp out an apology, but his words were lost in the fit of sputtering that seized him at the moment.

"Why the devil did n't you mark that stuff 'vinegar'?" Burson asked angrily, when he had recovered sufficiently to talk; "now we've lost a good account."

"Why did n't you bring your own refreshments," Art came back at him, in the same tone of voice. "I did n't know your customers would object to drinking a little vinegar." Then his unfailing good humor came to his rescue, and he said with a smile, "Well, you've lost a customer and I've gained one, so we've broken even on our first day's work. That is n't so bad, but here's for better luck to-morrow." And they shook on it.



AN artist should be conscientious and loyal in his work, and a devout and earnest citizen.

GIUSEPPE VERDI.



To agree with the greatest number of sound judges is to be in the right, and sound judges are persons of natural sensibility and acquired knowledge. On the other hand, it must be owned, there are critics whose praise is a libel and whose recommendation of any work is enough to condemn it.—WILLIAM HAZLITT.

# Making Artistic Pictures

WILFRED A. FRENCH



It is generally conceded that the practice of amateur photography is the pastime *par excellence*, because no other hobby can be compared with it for the boundless character of its joys and benefits. The winter-season, with its diversified indoor-activities, came to an end several months ago, and now the camerist is busy afield utilizing the picture-material that nature is unfolding with such unstinted generosity. Sauntering across meadow and field, over hill and through wood, while enjoying the freedom of air and sunshine, the camerist is to be envied, indeed. In contemplating the beautiful views that are spread before him, his thoughts no longer dwell on scenes of human strife and suffering — although his sympathies for a righteous cause are never allowed to slumber — but turn to those of harmony and peace. Although his pursuit arouses only the best that is in him, efforts to exemplify noble ideals, the camerist must not lose sight of the practical side of his activity — the endeavor to adapt scenic material to artistic requirements, for nature *per se* is not art and not to be interpreted literally. Unless he be an expert pictorialist, the camerist should remember to apply the knowledge he has acquired during the past winter-months to the making of better pictures, trying to profit by the mistakes he has made in composition or selection and in certain matters of technique. If successful in exhibitions and compositions, during the past year, he is probably one of those who do not remain satisfied, but seek to improve their best efforts, realizing that there is no such thing as perfection. He has studied the work of acknowledged masters in pictorial photography; he has sought and received criticism of his own pictorial efforts and intends to profit by it. He is now resolved to exercise more care in the choice of his themes and to bestow upon them the benefit of his accumulated knowledge. Aided, too — perhaps — by the pressure of economy, he will make fewer exposures, being determined that these shall represent his supreme ability. Without any reference to existing conditions, he will permit himself to be taken captive by an attractive view, though he will deliberate in capturing its beauty, considering carefully the most artistic aspect of the ultimate result.

He is supposed now to be viewing a landscape, weighing its artistic possibilities as affected by its component parts, including the sky, the light

and perspective. The sun is at the meridian; there are no long shadows to add to the pictorial interest. A well-balanced picture seems out of the question. Therefore, it may be well to wait, or to come again in the morning or in the afternoon, when the oblique rays of the sun will provide favoring shadows. The experienced worker, after having composed his picture, can easily imagine shadows of suitable length, and determine accordingly the hour at which the exposure is to be made. The novice, if so disposed, can make a hasty pencil-sketch of the scene, adding shadows of a length dictated by his own fancy, and return to the spot at the most favorable hour.

A good way to determine the pictorial quality of a promising landscape-subject is to follow the advice given by C. Baumann, in an admirable article, "Perception of the Visual Sense," in August PHOTO-ERA, 1907, in which he suggests that the appearance of a potential theme, let us say a landscape traversed by water — a lake or pond — where the center of interest changes according to the direction of the sun and other influences, be viewed critically, and in detail, at all hours of the day. There will be periods when the subject will merit an exposure; but most of the time it will appear uninviting.

Of course, if the sun is directly behind the camera, the view will lack character and hardly merit serious consideration except at a radically different hour of the day. Here, again, a sketch picturing the landscape with elongated shadows will give a hint regarding its pictorial value. On the other hand, a landscape with striking pictorial qualities may be made to look particularly impressive when photographed against the sun. Illuminating examples of this style of pictorial photography have appeared in these pages many times during the course of the past ten years. Attention is invited to an illustrated article on this subject by William S. Davis, in this issue.

As to weather-conditions, which greatly affect the character of the theme upon which the camerist is at work, these form an extremely interesting topic. Many a worker has lost patience, become discouraged and left the scene of promising pictorial activity with disgust, because the sun had disappeared unexpectedly behind the clouds for the rest of the day, or a shower or a prolonged fall of rain, if not a steady wind, had suddenly intruded itself, and thus put an end to his picture-making. In February PHOTO-ERA for 1917 will be found an exceptionally valuable article,





THE TOW-PATH

THREE PICTURES IN ONE

L. C. COOK

with a series of superb examples of pictorial photography, from the pen and camera of Charles S. Olcott, which ought forever to dispel the notion, existing in the minds of many amateurs, that pictures cannot be made under what hitherto have been considered impossible photographic conditions. And as to picturing a peopled street during a severe snowstorm, one need only to contemplate the winter-scene, by W. R. Bradford, that occupies a conspicuous place in this issue, to be convinced that apparent ill fortune is in reality a blessing. Indeed, such a condition may henceforth be welcomed rather than disdained.

A condition which most amateurs dread is when, during an ideal atmospheric stillness, and at a critical moment, a breeze suddenly springs up, creating a disturbance among the trees or flowers that are featured in the picture. It is easy to imagine an uneasy autochromist, bulb in hand, standing before a group of gorgeous rhododendrons gracefully swaying in the breeze. He glares fiercely at the unseen intruder, muttering anathemas between his teeth, and impatiently awaiting the lull which arrives at last. In the meantime, the owner of the garden where the camerist is having the time of his life, reposes comfortably on the veranda, saying to himself, "Thank heaven for this lovely breeze!"

Among the many things to avoid is pictorial redundancy — several complete pictures, or separate themes, on one plate — singleness of purpose being the keynote of a well-ordered composition. A brook or stream in perspective, with a pretty road running parallel to it, has tempted successfully many an amateur, and critical beholders of the print would ask themselves which of the two was the principal subject of interest. It should not be a difficult matter for the camerist to decide whether the road or the brook ought to be made the chief source of pictorial concern. If it can be done in the finished print — by trimming — it is easy of achievement before making the exposure.

Now, to go on with composition, which is the life of a pictorial photograph and, in one form or another, has been treated frequently in these pages and always by able writers. In trying to arrange an harmonious picture, the camerist need not be disturbed on account of a discordant note — an intrusive object in too high a key — for the reason that it can be cared for in the after-treatment of the negative. However, he must not abuse his ability to modify the harsh contrasts that may exist in the original view. To subdue the white sheen of the surface of a pond or lake, or to accord a similar treatment to a

"bald-headed" sky, or even to lighten the low tone of a shadow-mass, should be done with the utmost skill and judgment, as any overcorrection may tend to destroy the original color-values, and a practised eye is sure to detect an unsuccessful attempt to improve on nature. In this connection it may be well to remind the worker that the deepest shadows in nature, even when photographing against the sun, should not be represented by an absolute black, for, as a matter of fact, a pure black does not exist in nature — not even in the darkest night.

The camerist standing like a statue and gazing onward, upward, anticipating the precious moment when to expose the plate, presumably dislikes a blank sky in his picture. When he focused the view, quickly moving cumulous clouds filled the sky within the angle of his lens; but when he was about to execute the exposure, behold! they had passed on. He is philosophical, however, and, by and by, another group of superb clouds slowly approaches to occupy the space vacated by its predecessor. The camerist is ready, and, click! the vapory forms occupy the allotted place on the plate. But what if the sky remains cloudless during the rest of the day? This camerist, being a true sportsman, will wait for a day when clouds similar to those he lost appear in the sky, and photograph them on a separate plate, taking pains to suit the time to that of the previous cloudless exposure. To make a combination-print from the two negatives (double-printing) is easily accomplished by the initiated. Yet he who would print a morning-cloud into an afternoon-picture, or vice versa, or place a high-altitude cloud near a low horizon, may deceive the uninformed; but an expert — never!

This brings up the subject of clouds, or clouds in landscape, which has been treated in an exemplary manner by W. S. Davis in August PHOTO-ERA, 1910, and by Katherine Bingham in August, 1915. The September, 1915, competition was "Clouds in Landscape," and yielded a superb collection of subjects. A kindred topic is the management of chiaroscuro, in the open, with its manifold pictorial possibilities. Here, again, W. S. Davis has come to the rescue with a helpful illustrated essay, "Sunshine-Effects," in the May, 1916, issue, although hundreds of striking pictures illustrating this point have appeared in these pages during the past ten years.

Trees are not only an indispensable element in a truly pictorial landscape, but, in themselves, form one of the noblest of pictorial themes. This has been demonstrated in no more delightful manner than by Theodore Eitel, whose reputation as an exponent of pictorial photography is based upon his numerous beautiful portrayals of

the Kentucky beeches — so familiar to PHOTO-ERA readers for the past eight years. His illustrated essay, "The Forest and the Camera," which glorified the issue of September, 1910, is esteemed as a classic in photographic literature. W. S. Davis has also contributed several valuable treatises on trees, notably in July, 1912; and Herbert L. Gleason, in an elaborately pictured article that appeared in October, 1916, explained very convincingly the artistic adaptability of trees to the landscape. Of still further practical help to the tree-photographer are the PHOTO-ERA competitions' very attractive tree-pictures appearing in the June, 1910, and the November, 1912, issues.

A department in landscape-photography that many camerists avoid, because of the serious difficulties connected with it, is cascades, waterfalls and swiftly running streams, when enclosed by objects (woods or cliffs) that exclude the light. Of course, such subjects cannot be photographed satisfactorily by means of quick exposures, in which case gradation will be lacking in the running or falling water, and the setting will appear merely as an uninteresting black mass. A long exposure is necessary to equalize the result, to which end the use of a tripod for such work is indispensable. Now, there are workers who are partial to the water of a fall and expose for it at the expense of the setting. Others, again, care more for the latter, and slight the falls proper. Many camerists, on the other hand, prefer a good general view of the subject and compromise on the exposure. This method is exemplified in a very pleasing manner by Charles S. Olcott in his view of "The Happy Isles," Yosemite National Park, in the February, 1917, issue. Here an exposure of  $\frac{1}{5}$  of a second, with F/16 stop, was given, showing a fair degree of motion in the swiftly running brook and adequate detail in the wooded enclosure. The "Vernal Fall," same issue, had an exposure of  $\frac{1}{5}$  of a second, with lens stopped to F/8, but the fall was some distance away, and both pictures were made under adverse light-conditions. The extremely beautiful "Helen Hunt Falls" in the September, 1916, issue, was given a compromise exposure of  $\frac{1}{8}$  of a second, at 6 P.M., in August, and the result is admirable. In his "Hanging-Rock Falls" (January, 1917, issue), Chas. M. Debevoise has presented that charming spot with true artistic feeling. The conditions of light and atmosphere were very favorable, hence, even with his lens at F/16, he obtained a generally superb result. "Nevada Falls," by T. D. Fields (November, 1916, issue, and here reproduced), is a superb illustration of proportion, perspective and technical superiority with a correct feeling for elevation.



If the physical structure of the fall permits, i.e., if the mass of falling water is well divided from its setting, the skilful photographer exposes two separate plates — one on the fall proper, the other on the rest of the picture, using his judgment with regard to the amount of time necessary for each. The resulting combination-print will represent the view as it appears to the eye — the descending waters with a satisfactory scale of gradations and a fine sense of movement,

scape. In the former, the landscape — in its broader sense any open-air view, land or sea — dominates the figures, and in the latter the figures are subservient to the landscape. Nevertheless, more pictures are made in which the figures fail to harmonize with the landscape-setting than where they appear to be indispensable accessories. The trouble is that the figures are generally an afterthought; whereas the camerist should plan his picture in advance, if pos-



HARVEST

WILLIAM SPANTON

and the surroundings filled with adequate values and detail.

It is astonishing how highly the average amateur prizes a print picturing a perfect reflection. He regards such a performance as an eminently artistic one, and is intensely gratified when the beholder is unable to distinguish the original object from the mirrored image. Such pictures are interesting merely from a technical view-point, and in the case of certain views in Yosemite Valley, for instance, serve as spectacular sights. It is rather an artistic subordination of the reflected image of a mountain or other striking object in the landscape that adds pictorial value to the composition; but this can be obtained most advantageously when the surface of the sheet of water yielding the reflection is slightly disturbed by wind or rain, or rendered obscure by subaqueous vegetation.

Two of the most popular open-air subjects are landscapes with figures and figures in land-

sible, having his models arrayed in suitable costume as to color, and understanding clearly how they are to be utilized in the artistic scheme. Were it not that many new PHOTO-ERA readers are presumably not familiar with the Editor's persistent crusade against incongruous out-door apparel and accessories, certain oft-repeated criticism would be superfluous here. Women or men attired in white, however appropriate to the season, do not lend themselves happily to a sombre setting. A dark skirt and a light shirt-waist, or a dark costume accompanied by a white hat, may be regarded as a suitable combination in itself, but is exceedingly difficult to harmonize with a low-toned landscape. Of course, a child decorated with large light-colored hair-ribbons, however attractive to the feminine mind, is a *bête-noire* of the discriminating photographer. To be really in good taste, the hair-ribbon ought to be a shade darker than the child's hair, and, in that case, would adapt itself readily to the cam-

erist's pictorial design. If used in connection with a high-toned landscape or a view at the sea-shore or in a distinct marine-picture, a figure or figures arrayed in white can be made to appear as an inseparable part of the picture. Indeed, the several successful entries in our "Outdoor Portraits" competitions have included figures in light-colored costumes gently relieved against a background of water, the effect of

pictures of this kind, and, indeed, with any open-air subject.

Closely allied with the preceding subject is outdoor portraiture. Here, too, the quality and direction of the light are of the utmost importance. As in the case of the admirable sea-shore portrait by Henry H. Blank, in the November, 1914, issue, a delicate lighting of the face may be obtained by seeing that the sun is slightly back of



IN BRONX PARK

DR. D. J. RUZICKA

which was extremely pleasing. Among the authors of many delightful wood-interiors with figures, that have graced these pages on many occasions, are Dr. D. J. Ruzicka, J. H. Field and Richard Pertuch. Pictures from such distinguished sources deserve to be studied intelligently by the camerist eager to excel in this branch of photography. A standard work on this subject is "Landscape and Figure-Composition," lavishly illustrated, by Sadakichi Hartmann, and distributed by the Publisher of PHOTO-ERA. It will be noticed that the direction of the light plays an important part in the success of

the model, a temporary cone-shaped hood of black paper preventing the sun's rays from striking the lens. Ordinarily, it is more desirable to select the late afternoon for this work — a time when the light is less harsh in its effect. The writer remembers a portrait he made about twenty years ago and which professional experts pronounced equal to an ideal studio-effect. The young lady sat in a chair, quite in the open, and facing directly south. The sun had set, and the diffused light, first coming from the west, grew gradually weaker, as its source swung around towards the east, from which the shades of night



were gently stealing, thus imparting to the model's face a soft and beautifully graded quality of illumination. A fine and plastic result may also be obtained by placing the sitter, earlier in the day, in the shadow-side of a light-colored building—a barn, for instance. A bad practice—and one perpetuated by inexperienced camerists—is to photograph a group of persons standing or seated directly under a tree with the sun high above. The result is that the brilliant sunlight



JEAN

BEATRICE B. BELL

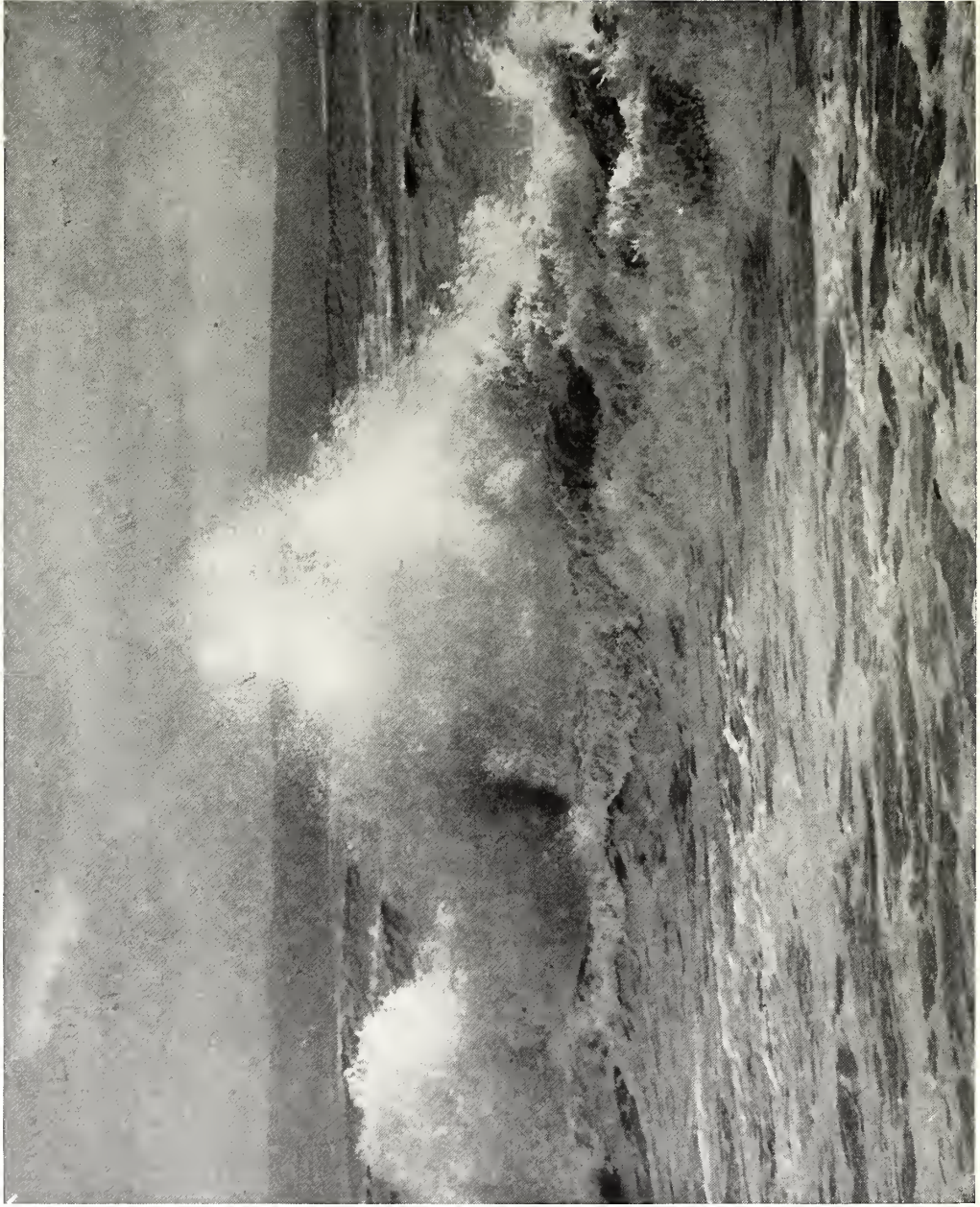
on the ground is reflected upwards into the faces of the group, producing a weird effect very similar to a flashlight-group when the source of light was on a line with their feet. And as to the inevitable souvenir-photograph of a picnic-party; how few have been made that show any attempt to give it an artistic touch? And what camerist is there who can produce a summer-outing party not disfigured by a white costume—i.e., the rest of the group being in dark clothes? Yes; it is possible to arrange even an ill-sorted group—heterogeneous as to character of dress—and make it yield a photograph that is harmonious and pleasing. Among well-known authorities that have written on these subjects for PHOTO-ERA are David J. Cook (September, 1912), Katherine Bingham (July, 1914), and Albert Niess (April, 1915). Highly successful competitions, "Outdoor-Portraits," were illustrated in October, 1912, and November, 1914. A special editorial, "Harmonious Open-Air Portraits," appeared in July, 1914.

The photography of public buildings or private residences, in the city, does not interest the average amateur; but there is one side to architectural photography that he ought not to overlook, and that is ancient landmarks, particularly those in his own community. One never knows when their existence may come to an end, and once destroyed, they can never be rebuilt—except in

the form of an imitation. Then there is one's own home or that of a friend, so that it is well that the camerist be able to perform the work as well as the professional expert. The latter has none of the sentiment that the amateur brings to his task, hence his efforts are perfunctory, though technically faultless. The amateur has the opportunity to become familiar with the associations that cluster around the structure; he can study the surroundings, the best points of view, and devote

himself to the work in a true *con amore* spirit. Expert knowledge as to the required technique and pictorial treatment may be gleaned from the illustrated papers by William S. Davis, in March, 1913, and Robert W. Tebbs, in July, 1915, editorials by Katherine Bingham during the years of 1913, 1914 and 1915, and an important competition in July, 1913. Architectural telephotography has been treated in a thoroughly able manner by Mauriee Houghton, in April, 1908.

The one great recreation that appeals to the camerist who lives not far from the water is marine-photography. So much has been written on this broad and fascinating topic, and beautiful pictures innumerable—speeding yachts, dashing waves, puffing tugs and bathing-scenes—have adorned these pages since the birth of PHOTO-ERA, nineteen years ago, that little is left for me to suggest. Therefore, without a lingering word, I simply urge every camerist eager to test his mettle this summer, or the successful enthusiast desirous to excel his last prize-marine, to read the illuminating and practical papers, illustrated so delightfully, by B. F. Langland, in July, 1913; F. A. Walter, in August, 1914; Alfred F. Loomis, in November, 1913; C. H. Claudy, in August, 1911, and William S. Davis, in August, 1908, July, 1910, and September, 1915. Katherine Bingham has contributed a number of highly



THE BREAKER

HAROLD A. TAYLOR



interesting and practical editorials for August and September, 1913 — also for August, 1914 — all worthy to be read thoughtfully. Inspiring, indeed, are the marine-pieces of such sterling artists as Harold A. Taylor, Richard Pertuch, William S. Davis and B. F. Langland. The numerous PHOTO-ERA competitions in marine-photography, held during the past ten years, yielded many charming scenes on the high seas, in harbors and at the shore, which, together with the usual editorial criticism, should be of great help to the student-camerist. Nearly every number of PHOTO-ERA, since 1898, contains at least one exemplary marine. Once in a while, however, an entry, sent in good faith to a monthly competition, reveals marks of very careless technique, such as prints trimmed parallel with the edges of the plate or film, but with the water-line decidedly off the level. Reminding one of these thoughtless workers, recently, that the water-line of his seascape was running violently uphill, he replied, promptly, that the print in question was intended for the "Uphill Perspective" competition. It is astonishing how frequent is this neglect to trim the print at right angles with the water-line, unless the perspective of a receding shore or stream makes this impossible. Besides, in restoring the lost equilibrium of the picture — by trimming the print at all four margins — the camerist cannot fail to notice that the area of the print is reduced in proportion to the horizontal divergence, sometimes causing the loss of valuable portions of the picture. Users of hand-cameras are the chief offenders in this respect, the remedy being the exercise of greater care in using the equipment.

A camera-activity that deals more or less with the landscape and, particularly, with pictorial composition is animal-photography. This has reference to the larger species — cattle, horses, sheep. It is comparatively easy to arrange sheep or cows in a compact group; indeed, one frequently meets them huddled together, when there is no trouble to photograph them. A pictorialist of experience employs well-known methods to coax domesticated or tamed animals to occupy a

position that suits his fancy; but to use coercive means does not always yield gratifying results. To induce a herd of cows to walk into or across the picture-field imparts a forced impression to the resulting picture. The animals will appear to be walking out of the picture; spontaneity of composition is lacking. Worse still, is to photograph a group of cows or sheep standing about promiscuously and facing in every direction, some of them astride the margins of the field, so that only the hinder parts are visible in the print. A picture including decapitated cows is surely not a pictorial success. The camerist familiar with the propensities of the guardian of a herd of cattle will certainly not risk a valuable camera,

or his personal safety, unless there is a chance of a speedy retreat. The gentleman who, busily focusing a group of placid-looking kine, his head completely under the focusing-cloth, was suddenly and unexpectedly transferred from his position of activity to one of safety and woe — beyond the stone-wall — has not been known to resume his love of pasture-



MULES

CHARLES M. MANSFIELD

photography. The photography of animals at short distances offers a certain pitfall to the camerist using a camera fitted with a short-focus lens. Violent perspective and grotesque distortion are the natural consequence. This subject has been explained ably and illustrated convincingly by W. S. Davis, in July, 1913, issue. Another admirable article on the correct and pictorial representation of animals, by this authoritative writer, will be found in May, 1913. J. F. Jones is another notable photographer of animals (cows and sheep), his pictorial successes appearing in the September, 1910, issue. An authoritative paper on the subject of dogs, from the pen and camera of Arthur G. Eldredge, appeared in the June, 1915, number and won universal approval.

The photography of parks and gardens, in general, constitutes another pleasing and grateful diversion. So many delightful combinations and effects are obtainable that the effort is surely worth while. The illustrated competition of January, 1916, is still fresh in the minds of most readers. Arthur G. Eldredge, a widely recognized

authority in landscape-gardening, contributed a valuable paper, with charming illustrations, to the July, 1914, number, and Katherine Bingham wrote a helpful editorial, "Garden-Scenes," for September, 1915.

Photographing children in the open is distinctly a summer-activity, and, of course, makes the strongest appeal to the parents. This explains the truism, "Where there's a baby, there's a camera." Albert Niess, of Washington, D. C., did not spend his time telling the neighbors what

and, incidentally, that the city offers camera-subjects to be found nowhere else.

Apropos of life in the city, there is a subject which, though exploited without stint, has not yet been exhausted. I refer to the rainy day. The camerist has seen little beyond the average umbrallad pedestrian, with particular attention to a line of puddles on the sidewalk; the dripping cab-horse, standing mournfully in front of a saloon; women at the street-market, or the generally monotonous, depressing appearance of a



SEVEN LITTLE KINGS

CHESTER A. REED

a wonderful baby he had, how winning its ways and how funny its many little pranks. He just went out, bought himself a superb, up-to-date hand-camera and photographed that infant in a hundred different ways — in mirth and in sorrow; sitting, crawling; climbing, falling; eating, sleeping; alone and with its mother. As PHOTO-ERA for April, 1915, was not large enough to accommodate all the prints of the most remarkable baby in the Nation's Capital, the Publisher decided to use only a few of them. It was hard to choose, for they were admirable — one and all. And Mr. Niess was good enough to yield up his secrets of child-photography. Selecting children of less tender age, Charles J. Adams attuned his charming little models to the landscape and produced a delightful article with an inimitable set of pictures. It is only fair to state that no one has ever surpassed Mr. Adams' achievement. For proof, examine the April, 1916, issue, and bestir yourselves, you camerists! But A. E. Churchill, equally fond of children's ways, chose to follow a different course. He established his activities in the Ghetto of New York, and in this particular aspect of the subject Mr. Churchill scored brilliantly — first, in October, 1914, and, second, in March, 1917. In each case, the camerist explained how easily the thing can be done,

park during or after the rain. He failed to notice two little tots struggling to find shelter beneath the tattered remains of a silk parasol acquired at the bargain-counter of a popular dump-heap. Among other neglected pictorial possibilities that might be mentioned is a Ghetto-child, protected against the rain by an old shawl folded over her head and around her slender body, hurrying to the grocery or, maybe, about to enter a drug-store. After a heavy shower, the gutter will be flooded — an opportunity little street-urchins will be quick to seize by setting afloat improvised, diminutive water-craft. And thus the camerist quick to see artistic possibilities in inclement weather will not complain for the lack of suitable picture-material. This wet-weather subject has been treated in a very practical way by Katherine Bingham in October, 1913, and a particularly successful competition appeared in February, 1914.

During the nesting-season of song-birds, the nature-lover, camera in hand, may often be seen busily watching a bird's-nest in the hope of capturing a good view of the parent-bird feeding its young, or of some other interesting episode. If the camerist is inexperienced in this interesting, but unusually difficult, line of work, he may have very few good pictures to show for his pains. The



average bird's-nest — as seen reproduced in periodicals devoted to recreation or outdoor sports — is a confused mass of twigs and leaves, poorly defined and poorly lighted. It is almost impossible to distinguish the bird from the nest. No doubt that is the way in which the object appears at first sight; but instead of viewing it critically, the camerist merely suits his own personal convenience, "snaps" it and sends a print to the publisher in the hope that it will be accepted merely because the obviously unattractive aspect of the nest, as he first noticed it, seems to show the utter hopelessness of getting anything better. That is no credit to the art of photography or any indication of what photographic skill can accomplish. The professional illustrator smiles at such inadequate results, and forthwith replaces them with attractive, well-drawn and convincing sketches, which find instant appreciation. Were the camerist to approach the subject in an intelligent manner, or to adopt a method used and described by Guy A. Bailey, in the May issue, he would achieve results of which he could be proud. In any event, he must provide himself with a suitable equipment and have the necessary degree of vigilance and perseverance. Among the numerous illustrated articles on this subject of bird-photography that have appeared in these pages, the best are by the late Chester A. Reed, photographer and publisher, in May, 1910, and by Guy A. Bailey, noted specialist and contributor to *Bird-Lore*, in May,

1917. An important editorial will be found in May, 1915, and productive competitions in May, 1910, and November, 1914.

To the minds of a large proportion of amateurs, the photography of flowers is the most fascinating of all outdoor camera-activities. Yet

simple as this work may seem to the uninitiated, many enthusiastic devotees have not succeeded in grasping the evanescent, mysterious beauty of a simple wild-flower in its modest retreat, and interpreting it in an artistically sympathetic manner. A clear-cut, perfunctory portrayal of its physical structure does scant justice to the real beauty of a flower in the woods or in the field. In this connection, one sometimes wonders why the professional flower-painter prefers to represent his subjects arrayed amid elegant surroundings — in cut-glass bowls or costly vases standing on marble tables or relieved against rich draperies. Does he ever think of painting the flower of the poor woman who lives in a basement, amid poverty and squalor? She, too, is fond of flowers, but is unable to defray the cost of a fitting receptacle. So she places her modest flower — not an American Beauty or



GOLDEN-ROD

GEORGE ALEXANDER

a Killarney Rose — in a broken jar, and, as it stands on an old table, it affords the poor widow fully as much joy as the costly array of orchids does to the woman of wealth. Perhaps some amateur may take this little hint and pay a visit to some humble abode in the country, or in the city, where the poor woman's flower is just as content



BUTTERFLY AND WHITE COSMOS

WILLIAM S. DAVIS

as if it reposed in milady's boudoir. The artistic treatment of flowers, to express their celestial beauty with sympathy and poetic feeling, has been told many times in these pages, by word and picture, although, it must be confessed, that the latter has appeared the more eloquent medium. The student-worker is referred to the delightful flower-studies by Fannie T. Cassidy, George Alexander, William S. Davis, E. Louise Marillier, Katherine Bingham and H. R. Decker that have appeared in *PHOTO-ERA*, from time to time, during the past ten years. As truthful records of the flora of the Rocky Mountains, the pictures of wild-flowers of Pike's Peak, by Kenneth Hartley, that appeared in June, 1915, will continue to be of interest to the naturalist, the explorer and the photographer. The results of a number of successful competitions, with flowers as the subject, have been published in *PHOTO-ERA* during the past nine years, so that highly trustworthy sources of information are plentiful and available. The camerist interested in other nature-subjects is referred to an article, beautifully illustrated, on moth-photography, by Edwin A. Roberts, in May, 1916; and one on comic insect-photography, by Lehman Wendell, September, 1916.

In conclusion, the camerist who is keenly desirous to express himself through the medium of diffused definition should first ascertain the object and meaning of soft-focus photography. To this end, he should read the application of the soft-focus lens to landscape, by Charles O. Dexter, in the June, 1915, issue, and Arthur

Hammond, in the November, 1911, issue, although no one has shown a more rational application of the uncorrected lens than Dr. D. J. Ruzicka. The foregoing remarks, though of a somewhat rambling nature, are written in the hope that they may serve as suggestions to the camerist at a time when he is industriously pursuing his hobby. Let his feverish haste to capture everything in sight be tempered with judgment. An album or portfolio containing, let us say, fifty choice prints will serve to entertain a visitor far more pleasurably than one filled with ten times that number of mediocre impressions. Hasty methods of production in photography, as in any other pursuit, without discrimination, are responsible

for many failures. Skill combined with deliberate thought and judgment will always tell in the practice of photography.



THERE is one result of the perennial controversy entitled "Sharp v. Fuzzy" against which it is not possible to give too emphatic a warning; and that is the belief which it is apt to generate in the minds of some who are just taking up photography that good technique does not matter. A letter in these columns stated recently that "It is almost a crime to submit a technically perfect photograph to the average show," and those who do not see many exhibitions may gather that this is the fact rather than a little bit of picturesque exaggeration, and that, such being the case, there is no need to bother about overcoming the preliminary difficulties involved in learning to make technically perfect photographs. We have seen more exhibitions and competitions than falls to the lot of most workers, and we state emphatically that in every one in which there has been any selection of the exhibits at all, no picture has been given a good position which bore any evidence of poor technique, and very few such have been admitted at all. Nor are we believers in what may be called the fluke success. Depend upon it, the very first essential to the successful production of a photographic picture, whether it is to be sharp or fuzzy, strong or soft, clear or foggy, is knowing how to use the materials and processes so as to yield one result or the other, at the will of the user.—*Photography*.





## EDITORIAL



### The Camera in War-Time

THE time has come when the nation is face to face with a situation that will tax all its energies, wisdom, loyalty and resources to master. In the course of this gigantic undertaking, certain industries will gain and others will suffer, in proportion as they are affected by the new conditions. Obviously, this great war — resulting, as it must, either in the maintenance or the destruction of those ideals for which the champions of democracy fought and laid down their lives — will result in great pecuniary benefit to the producers of material necessary to combat the violators of the nation's honor; whereas it will tend to discourage, to a certain extent, the pursuit of esthetic activities. Yet the new conditions will move the people to a larger appreciation of its nobler attributes — sympathy, charity and self-sacrifice, and, in a material sense, of the lessons of economy.

During the approaching crisis, however, there will be need of diversions for anxious and distressed non-combatants, and the one that commends itself preëminently is the practice of photography. And may we not here consider the example of England, where, in the face of the most critical period in her history, the entire body of amateur photographers, together with the photographic press, is exhibiting a degree of energy and productiveness that is as admirable as it is amazing. Such time-honored institutions as the annual shows of the Royal Photographic Society and the London Salon have suffered no interruption since the beginning of the present war, and the same is true of the several photographic periodicals. Can we do less than to emulate this display of enthusiastic industry when we, too, come to realize the horrors of war? Often, times of stress and anxiety seem to act as a stimulus to greater achievement, which is certainly true in the case of several of England's most eminent pictorialists. But in the United States, the same as in Great Britain, the camerist should be careful to observe the restrictions that the Government is very likely to impose upon the use of cameras in war-time. His own intelligence will suggest to him what camera-subject he should exclude, viz., defense-works, bridges, canals, factories, light-houses, wireless-stations — in fact, any object or locality that may prove of interest to the enemy.

### Beauty or Ugliness

THE assertion, so often made, that certain subjects in painting — although painted in all sincerity — have a tendency to repel instead of to attract the beholder ought to be pretty good logic. There are artists who, unable to manifest their talent through the medium of the comely, prefer types that are unprepossessing, if not actually hideous. These artists seem to be laboring under the impression that beauty and character do not go hand in hand. If a woman, beautiful of face and figure, as well as of mind and soul, does not attract the interpretive skill of one artist, she certainly will that of another.

Persons who are familiar with the works of some of the sixteenth-century painters — notably Rivera, Ribalta and El Greco — probably remember realistic representations of physical torture, including scenes of martyrdom of Christian saints, that may still be seen in the art-galleries of Europe. Fortunately, that kind of art has not been perpetuated. There are, however, among the present-day painters, not a few who seem to delight in picturing coarse types of men and women, a sort of revival of those disgusting scenes in which the small Flemish masters of the seventeenth century used to excel. Among the painters who have strong inclinations toward the ugly and unattractive side of the human species, is the Spanish painter Zuloaga, who has been exhibiting his diversified genre-pictures in this country. The merit of novelty of this artist's style is generally recognized; but that it makes a genuine appeal to art-lovers is an open question. How such pictures are expected to arouse noble emotions in men accustomed to exalted ideals, is hard to understand. How they came to be painted may be ascribed to the artist's possible love of bull- and cock-fights, which cruel sports cannot but brutalize and degrade the human soul.

It is sincerely to be hoped that the devotees of pictorial photography will not be influenced by such movements in art, but remain true to their own lofty ideals. Pictorial photography is so broad and comprehensive in its scope, both in subject and mode of expression, that there is no danger of monotony in the present artistic treatment of pictorial themes. Nevertheless, it should be remembered that an absence of defects does not necessarily make a work of art, also that an absence of beauty condemns it.



## ADVANCED COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Advanced Competition  
383 Boylston Street, Boston, U. S. A.



### Prizes

*First Prize:* Value \$10.00.

*Second Prize:* Value \$5.00.

*Third Prize:* Value \$2.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

### Rules

1. This competition is free and open to any camerist desiring to enter.

2. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

3. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. Each print entered must bear the maker's name, address, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit in each case being given to the maker.

6. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of ***stiff corrugated board, not the flexible kind, or with thin wood-veneer.*** Large packages may be sent by express very cheaply and with indemnity against loss.

7. The prints winning prizes or Honorable Mention in the twelve successive competitions of every year constitute a circulating collection which will be sent for public exhibition to camera-clubs, art-clubs and educational institutions throughout the country. The only charge is prepayment of expressage to the next destination on the route-list. This collection is every year of rare beauty and exceptional educational value.

### Quarterly Miscellaneous Competitions

In order to extend the opportunities for participation by a larger number of our readers, and to broaden the scope of the entries, these will be a feature of 1917.

### Awards — Spirit of Winter Competition Closed March 31, 1917

*First Prize:* A. B. Street.

*Second Prize:* Charles G. Begg.

*Third Prize:* Alexander Murray.

*Hors Concours:* W. R. Bradford.

*Honorable Mention:* James Allan, C. A. Barnes, Jr., W. B. Baxter, Beatrice B. Bell, L. O. Bogart, Rupert Bridge, Kenneth Dows, Louis A. Dyar, Jared Gardner, A. Gascoigne, A. B. Hargett, Bertran F. Hawley, Antoinette B. Hervey, A. Johnson, T. W. Lindsell, Louis R. Murray, Robert P. Nute, J. A. Perley, Wilmer S. Richter, Myra D. Scales, Kenneth D. Smith, W. Steleik, E. W. Trelawny.

### Subjects for Competition — 1917

"Home-Portraits." Closes April 30.

"Miscellaneous." Closes May 31.

"The Spirit of Spring." Closes June 30.

"Landscapes with Figures." Closes July 31.

"Miscellaneous." Closes August 31.

"The Spirit of Summer." Closes September 30.

"Vacation-Pictures." Closes October 31.

"Miscellaneous." Closes November 30.

"Flashlights." Closes December 31.

1918

"The Spirit of Christmas." Closes January 31.

"Miscellaneous." Closes February 28.

"The Spirit of Winter." Closes March 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

### Free Trial-Subscriptions

PARTICIPANTS in either PHOTO-ERA monthly competition, who receive Honorable Mention, may have the privilege to give to a friend — not a reader of the magazine — a free trial-subscription of three months. This plan is also to be retroactive and to include entrants in competitions beginning with March, 1917.

If those who are interested in this proposition will promptly notify the Publisher, their wishes shall be complied with immediately.





"SEVENTY-SEVEN FEET"  
ALBERT B. STREET  
FIRST PRIZE — SPIRIT OF WINTER

## Landscapes With Figures

### Advanced Competition — Closes July 31, 1917

ENTRANTS in this month's competition will do well to notice that the title differs from that of the last contest of a similar nature, which was "Figures in Landscape." In the latter case the emphasis is on the figures, and they should be the most important, whereas in this month's entries the landscape is to be predominant and the figures merely incidental. Of one thing the worker must be sure — that landscape and figures are not equally important. One or the other — and in this contest the landscape — must have unquestionably stronger interest.

Not all landscapes permit the successful introduction of figures. There must be some logical place for them and an intelligible reason for their being there. Above all, they must not be put there obviously for the sake of having their pictures taken. Seldom is it advisable to have them face the camera directly, as their interest in it — and in the person behind it — is too obvious for the best results. If the figures can be shown to be interested in something within the picture-space, with their eyes on some work that they are doing, or turned to some one person in the group, so that the interest is all contained within the picture-space, the unification of the whole is brought about. There is nothing accomplished by introducing incongruous figures "just any place" in a landscape — unless it be the marring of an otherwise perfectly good picture. When figures are introduced they should not only be in keeping with the nature of the scene, but they should be placed near the natural focus of the lines of the composition, or they will draw the eye away from that point — a thing to be avoided. It would seem needless to emphasize the fact that figures should be in keeping; but some of the incongruities one sees make it seem wise to call attention to that fact. One would laugh at the photographer who attempted to make country-folk in their commonest toil-stained garments appear at home in a city ball-room — yet why is it not just as much out of keeping to show women and children in "party-frocks" and furbelows raking hay or engaged in similar pastoral pursuits? It outrages one's sense of fitness. Nothing could be more natural or consistent, on the other hand, than to show the farm-hand in his natural garb engaged in some such labor, or the women of the family picking fruit or harvesting vegetables in the home-fields. Their low-toned garments blend with their surroundings with pleasing effect; whereas the starched whiteness of a more conventional garb would stand out with unpleasant insistence and mar the whole composition.

The "bare-foot boy" beating the brook, with a bent pin for a hook, or whistling along a country-lane, is better picture-material than some model of the tailor's art with the latest sporting-equipment. The placing of the figures is not less important than the nature of the figures themselves. In nearly all well-arranged landscape-pictures there is a focal point — a spot toward which the lines of road, path or distant hills converge; the place where the eye rests naturally when looking at the view. If the figures are placed very far from this natural center of interest, they draw the eye away and create confusion. Corot, the great French artist, introduces figures into nearly all of his dream-like landscapes; but his placing of them is sometimes open to criticism. In his "Orpheus and Eurydice" the two figures are just about to vanish from the right-hand margin of the picture. The chief interest is the beautiful, softly gray-green landscape at the left, yet the figures are of sufficient size to create a counter-interest, and in reality, separated by a tree from the main picture, they

form a separate picture by themselves. However, in most of his paintings, the figures are small and well placed. Daubigny is another landscape-artist who is fond of introducing figures. An admirable example is "Le Printemps." Here, the line of trees and the direction of the path lead directly to the small figure, which is in entire harmony with the whole scene.

The files of PHOTO-ERA do not seem to furnish many examples of this kind of composition, but the issue for January, 1915, has one or two of interest. On page 7 is one in which the figure adds immeasurably to the desired effect. It is placed at exactly the right point — the lines of the house-roofs at the right and left; the lines of the walk and of the bases of the tree-trunks on each side all converge on the boy with the umbrella, who walks calmly away from us, bent on his own business, in the rain. The umbrella furnishes the needed explanation of the misty atmospheric condition. Page 25 of the same issue shows another well-placed figure. The composition is in low tones, and so soft in focus that one must look closely to discover whether the woman is "coming or going;" but she makes a dark accent at the strategic point, where the lines of the path direct the eye. The results of the last contest on this subject were published in the issue of PHOTO-ERA for September, 1915. The first prize went to a very painter-like picture shown on page 141. The whole landscape is soft and full of atmosphere, with the dark accent of the houses and plowman very well placed. It is a simple composition, but well chosen and admirably carried out, with poetic feeling predominant rather than a desire to render accurately commonplace detail. In the second-prize print we have an exceedingly attractive figure, well posed and with graceful lines of drapery. However, it is perilously near the center of the picture, and large enough to come very near usurping more attention than is allowable. The attraction of figure and landscape is very nearly balanced. In the print winning the third prize the school-children might have been allowed to go a few steps farther along the road, yet they are so unconcerned that one does not mind their being a trifle large. In the Honorable-Mention print on the next page we have a wide sweep of country to which it is doubtful that the figures are any particular addition. However, they are very small, and exceedingly well placed at the crossing of the lines of the composition. If a line were drawn along the fence at the right it would fall along the bit of fence and the bush at the left. Another, drawn along the line of the road at the left, and connecting with the lighted segment of beach beyond, would cross the first just about where the figures are located. The entries in this contest were numerous and the number of prints deserving special mention was large, yet the editor found the entries as a whole rather lacking in pictorial and imaginative qualities. A mere record of facts does not stand much chance of consideration in these competitions. Faults of technique are more likely to be overlooked than lack of poetic feeling and imagination.

Too many of us go through life with our eyes closed to the beauty and pictorial quality of the commonplace. When we wish to "make a picture," we go far afield and search for some unusual or inaccessible view — we take some friend along, and, dressing him in unusual garb, we place him in unaccustomed surroundings and make our exposure. As a matter of fact, we may have passed at our own back-door a better — because more natural — picture. We overlook the value of the usual. Let us have our eyes open to the beauty inherent in every-day things, and not strain after novelty, which, when we have attained it, is less valuable, because less true to life and nature than the incidents of every-day life.

KATHERINE BINGHAM.





THE BEACH IN WINTER

CHARLES G. BEGG

SECOND PRIZE — SPIRIT OF WINTER

### How To Use Dry Mounting Tissue

I HAVE read a number of articles on the different ways to mount photographs, and although all are good in their way, I believe that there is nothing quite so satisfactory all around as the dry mounting tissue. I have used quantities of it on hundreds of prints, and it has proved itself — over and over again — satisfactory in every way.

To begin with: cut a piece of the tissue a trifle larger than the print; place on back of print and touch with the point of a hot flat-iron, a few places along the edge, just to hold the tissue in place; trim print and tissue together, and place them on mount — being sure that they are perfectly straight and even — lay a piece of thin white paper over the face of the print and hold it securely so that it will not slip; press firmly for a few seconds with a moderately hot flat-iron — do not rub the iron or the print will move from its position — then, *immediately* on removing iron and paper, rub the print down with a clean soft cloth. If there is any spot that does not stick closely, try again, using the paper and the flat-iron as already described, and continue to do so until the entire surface is uniformly smooth. Oftentimes, with a small print which can be covered with the flat-iron, one operation will be all that is necessary; but usually it is better to go over it more than once, to be sure that there is perfect contact at all edges and corners.

In the case of a larger print, 8 x 10, for instance, proceed in the same manner, but begin pressing at the middle of the print, being sure at all times that both print and white paper are held securely in place before the flat-iron is applied. Remove paper, and rub down that part of the print with the soft cloth, then proceed again, working both ways — a small place at a time — always beginning where the print

has already adhered to the mount towards the edges and corners. Possibly even then there may be a place where it does not stick closely; but I have found that persistent rubbing while the print was hot will always bring the desired result. I might say right here that I am confident that the real secret of success in using the dry mounting tissue is in the rubbing of the print while hot.

If, for any reason, it is desired to remove the print from the mount, it can be done also by heat. It has been suggested that holding mounted print, face down, over a lighted gas-burner will “do the trick;” but that method is rather to the detriment of the fingers. I have found that pressing and rubbing on the back of the mount with a hot flat-iron until the mount is thoroughly heated through will loosen the tissue so that the print may be easily peeled off, with no damage to either mount or print.

I consider this method of mounting prints the most successful of any. Possibly not the most economical, but like many other good things, we are not always looking for the cheapest, but for the best. Where economy is to be considered, I believe that the pennies we save on other mediums for our ordinary work should be used to purchase a supply of dry mounting tissue for the choicest of our prints. This method is ideal for album-work, as there is absolutely no curling or warping whatever — no matter how thin the mount may be.

This article is not written with the idea in mind to advertise dry mounting tissue, but rather to pass along a good thing. I think that all camerists are like the physicians; in one respect, at least. When they find a good thing, they do not try to hoard it up for their personal use, but pass it along to the “friends in the profession.” — ADDIE M. HARTON.



A DEEP-DRIFTED CORNER

ALEXANDER MURRAY

### Enlarged Negatives Quickly

ONE of the methods to make enlarged negatives, which apparently is not so generally used as it deserves to be, is particularly suitable for the purposes of a professional photographer, who has usually at his disposal the large camera which is required. It consists in making from the small negative a print on glossy or semi-glossy print-out paper of depth which looks just right, that is, is not over-printed as for toning. The copying-camera having been set up and adjusted according to the degree of enlargement required in the enlarged negative, this print is then copied-enlarged upon a plate of medium speed. This can be done by either weak daylight or artificial light without the print suffering in any way during exposure, although it should not be exposed longer than can be helped, and, therefore, focusing should be done in advance upon a piece of printed matter, the place of which is taken by the

printing-out paper print when all is in readiness for exposure. We recently saw in an acquaintance's studio a very neat accessory for facilitating the use of this method in conjunction with the ordinary studio-camera. It consisted of a long, narrow, and light baseboard, at the end of which was fixed, at right angles, a small easel for the support of the print. The studio-camera had been slightly adapted, so that this baseboard could be slid under a pair of guides secured to the camera baseboard, and the small easel thus be placed at any required distance from the lens. Undoubtedly, for all copying-work, a camera set apart for the purpose is the better plan, but in this case the appliance could be made ready for operation in a minute or so.

*British Journal of Photography.*

It will be good to compare your print of a luxuriant flower-garden of recent years with one to be made in 1917 — showing a crop of corn or vegetables!





### The Wheel Glass-Cutter

MANY photographers have at some time or other occasion to cut glass, and no doubt most of them use the wheel-cutters, which are soon thrown away as of no use. Perhaps the following tip will be of service to them. I had occasion to cut some glass a few days ago, and had only an old, and, as I thought, worn-out wheel to do it with. I tried dipping it in a drop of paraffin, and was astonished to find that it cut as well as when new. I experimented with two others which I had discarded, and found that they cut equally well. Turpentine seems to answer the same purpose.

This may be a welcome tip to some of your readers; it was certainly a new experience for me.

*Amateur Photographer.*

### Washing Postcards

C. R. D., in the *Amateur Photographer*, states that to the average photographic worker the washing of prints always presents a problem which is not easy of solution, and postcards in particular, on account of their extra weight, have a tendency to sink to the bottom of the tank, and lie there in a heaped-up mass. In this condition it is impossible to get rid of the hypo from the film, and consequently postcards done in this fashion cannot be said to be washed at all, and in a few months' time spots and stains are nearly certain to make their appearance on the cards. A very simple way to make sure that the cards will be thoroughly washed is to use the rack in which the plates are placed for washing. A quarter-plate rack is just right for postcards, as when these are placed in position the cards will be slightly bent, and thus kept firmly in the grooves. Some cards have a tendency to float to the top of the water, and this can be prevented by fastening a piece of string over the top of the cards, and fixing the ends to the edges of the rack. This will be found one of the most convenient ways to wash cards to the worker who only does a few at a time.

### Blisters on Bromide Prints

A NUMBER of cases of blisters on bromide prints and enlargements have been brought to our notice lately, with queries as to cause and cure. Contributing causes are many in number. For example: (1) Kinks, cracks, creases, folds, etc., in the paper. (2) Handling the print with hot finger tips. (3) Sudden change of temperature; e.g., putting the print into tepid water after it has been in icy cold water, or vice versa. (4) Change of density of baths, e.g., passing a print from a strong (dense) hypo fixing-bath straight into plain washing water. [Note.—Dissolving hypo in water lowers the temperature from ten to twenty degrees. Therefore, tepid-warm water should be used for making up a fixing-bath which it is desired to use at once.] (5) The use of soft water. (6) The use of water in which much air has been dissolved. (7) Washing under a spray delivering water with considerable force. (8) The use of too much alkali (especially caustic alkali) in the developer. (9) The use of too strong sulphide solution, or the use of stale (decomposed) sulphide in the sulphide toning process. (10) A strongly acid bleaching bath is another cause.

Pricking the paper back of big blisters, gently pressing out the air, and then contracting the gelatine with methylated spirit is a good plan to adopt. This procedure is not applicable in the case of a crop of small blisters. These may usually, but not always, be reduced by mopping the print with a piece of cotton-wool dipped in equal parts of water and methylated spirit, and then in methylated spirit only.

If the print shows blisters in the fixing-bath they will probably grow bigger if transferred straight to plain water. To prevent this, pass the print into a solution of table-salt the same strength or proportion as the hypo and water-bath, and then dilute this salt-bath slowly by adding a little water at a time and rocking the dish. Another suggestion is to use two fixing-baths — i.e., ten minutes in ten percent hypo, and then ten minutes in five percent hypo — and then two percent salt-bath. Another method is to clean a sheet of ground-glass with soap and water, dry it, dust it with powdered salt or French chalk, lightly brush this off the ground-side, lay face down the wet-blistered print onto the ground-side, lightly squeegee, allow to dry thoroughly, and then strip. This is good for large prints and small blisters.

Where the trouble comes after bleaching and sulphide-toning, perhaps the best preventive is the simplest of all; viz., to let the prints dry thoroughly after washing and before sulphiding.

For hardening before fixing, the following have been advocated: (1) Water, 20 ounces; common alum,  $\frac{1}{2}$  ounce. (2) Water, 10 ounces; chrome alum, 1 dram. (3) Water, 10 ounces; formalin, 1 dram.

For combined fixing and hardening: (1) Dissolve in the following order in water 10 ounces: Hypo, 2 ounces; soda sulphite,  $\frac{1}{2}$  ounce; alum, 1 dram; acetic acid,  $1\frac{1}{2}$  drams. (2) In 5 ounces of water dissolve 1 ounce soda sulphite, then add slowly 1 dram sulphuric acid; add 20 ounces of water, then  $\frac{1}{2}$  pound of hypo; when this is dissolved, add  $\frac{1}{2}$  ounce chrome alum dissolved in 5 ounces of water. (3) Water, 20 ounces; hypo, 2 ounces; soda bisulphite,  $\frac{1}{4}$  ounce; chrome alum, 1 dram.

*Amateur Photographer.*

### Diffusing the Image in Fixed-Focus Enlargers

It sometimes happens when enlarging with one of the popular fixed-focus daylight enlargers or printing-boxes the all-over-sharp result fails to quite satisfy our pictorial sense, and we wish for some means of diffusing the image. One plan is to lay a piece of the bolting-silk sold for this purpose across the bromide paper; but it often happens that this is not obtainable locally, and some kind of substitute must be devised. The present writer has made use of a piece of butter-muslin fixed to a light cardboard-frame made to fit into the enlarger about an inch above the bromide paper. Such a frame is easily fitted up, the coarse butter-muslin fixed with "seccotine," and when required for use the whole may be fastened with four drawing-pins underneath the frame to the inside of the enlarger or printing-box. It will be found that a slight diffusion will be produced over the enlargement that will take away any over-sharp qualities that the negative may possess, and thus enhance the pictorial result in the manner desired.

*Amateur Photographer.*



WINTER'S REIGN  
W. R. BRADFORD  
HORS CONCOURS — SPIRIT OF WINTER







# BEGINNERS' COMPETITION

Closing the last day of every month  
Address all prints to PHOTO-ERA, Round Robin Guild Competition  
383 Boylston Street, Boston, U. S. A.



## Prizes

*First Prize:* Value \$5.00.

*Second Prize:* Value \$2.50.

*Third Prize:* Value \$1.50.

*Honorable Mention:* Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

A certificate of award, printed on parchment paper, will be sent on request.

**Subject** for each contest is "*Miscellaneous*"; but only original prints are desired.

Prizes, chosen by the winner, will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

## Rules

1. This competition is open only to members of the Round Robin Guild. Membership, however, is free to all subscribers; also to regular purchasers of PHOTO-ERA on receipt of their name and address, for registration, and that of their dealer.

2. All Guild members are eligible in this competition provided they never have received a prize from PHOTO-ERA other than in the Beginners' Class. Any one who has received only Honorable Mention in the PHOTO-ERA Advanced Competition still remains eligible in the Round Robin Guild Beginners' Competition; but upon winning a prize in the Advanced Class, one cannot again participate in the Beginners' Class. Of course, beginners are at liberty to enter the Advanced Class whenever they so desire.

3. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be artistically mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Sepia-prints on rough paper are not suitable for reproduction, and such should be accompanied by smooth prints on P. O. P., or black-and-white paper having the same gradations and detail.

4. *Unsuccessful prints will not be returned unless return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. If suitable, they will be published in PHOTO-ERA, full credit being given.

6. *Each print entered must bear the maker's name, address, Guild-number, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what contest it is intended.*

7. Competitors are requested not to send enlargements greater in size than 8 x 10 or mounts larger than 12 x 15, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind, or with thin wood-vener. Large packages may be sent by express very cheaply and with indemnity against loss.

## Awards — Beginners' Contest

Closed March 31, 1917

*First Prize:* V. S. Matson.

*Second Prize:* L. C. MacDonald.

*Third Prize:* J. Burke.

*Honorable Mention:* W. J. Adams, Margaret Anderson, Geo. W. French, Henry L. Osborn, Mrs. H. G. Reed, Geo. P. Russell, M. C. Still, Chas. F. Smith, E. W. Underhill, A. J. Voorhees.

Special commendation is due the following workers for meritorious prints: H. E. Glover, Louis Dubois.

## Why Every Beginner Should Compete

THE trouble with most competitions is that they place the beginner at a disadvantage. If advanced workers be allowed to compete, beginners have little chance to win prizes, and so quickly lose interest after a few trials.

There are two monthly competitions in which prints may be entered, with prizes commensurate with the value of the subjects likely to be entered. They are: The Round Robin Guild Competition and the PHOTO-ERA Competition. The former is the better one for a beginner to enter first, though he may, whenever it pleases him, participate in the latter. After having won a few prizes in the Beginners' Class it is time to enter prints in the PHOTO-ERA Advanced Competition.

As soon as one has been awarded a prize in the PHOTO-ERA Competition, he may consider himself an advanced worker, so far as PHOTO-ERA records are concerned, and after that time, naturally, he will not care to be announced as the winner of a prize in the Beginners' Class, but will prefer always to compete in the PHOTO-ERA Competition for advanced workers. In accordance with this natural impulse, it has been made a rule by the Publisher that prize-winners in the Advanced Class may not compete in the Beginners' Class.

To measure skill with other beginners tends to maintain interest in the competition every month. Competent judges select the prize-winning prints, and if one does not find his among them there is a good reason. Sending a print which failed to the Guild Editor for criticism will disclose what it was, and if the error be technical rather than artistic, a request to the Guild Editor for suggestions how to avoid the trouble will bring forth expert information. The Round Robin Guild Departments, including those of personal counsel and criticism, form an endless chain of advice and assistance if members will connect the links.

## Change of Address

SUBSCRIBERS who desire to change their addresses are requested to inform us not later than the 5th of the previous month, as the envelopes must be addressed and classified for mailing on the 10th.

Failure to do this puts it up to the subscriber to procure his copy from his former post-office address, and no duplicate copy can be expected from the Publisher of PHOTO-ERA.

We beg to invite the attention of workers to the rules governing the Advanced and Beginners' Competitions in order to facilitate a fair, intelligent and prompt decision on the part of the judges.



ON THE LAKE-SHORE

V. S. MATSON

FIRST PRIZE — BEGINNERS' CONTEST

### Is the Small Camera Practical?

"As long as the world contains them both," the small and the large camera will each have strong adherents; but there should be no rivalry between them, for each has its place which the other could not possibly fill. The pictorialist, as a rule, is a strong adherent of the large camera, with its facilities for composition on the ground-glass and the advantages of being able to make contact prints from large negatives; but even he falls back on the convenient film-camera when on trips, where the large equipment would be too bulky and heavy to be practical. He might also use it to advantage in making notes, as one might say. It is not possible to have one's 8 x 10 camera always at hand; and many times when one is bent on other business a real picture is suddenly encountered. If one has the ever-ready vest-pocket or other small compact camera about one's person an exposure may be made — or two or three snaps from different view-points for future reference when it is possible to bring the larger equipment into action. If one has a particular picture in mind to study it is a great saving of money, as well as of strength and effort, to "make notes" with the small camera. These may be studied at home and at leisure; the different effects of light should be noted; the changes brought about in composition by a slight change of view-point; the best spacing determined upon, and the amount of scenery to be included in the view. When this has been done it is necessary to transport one's heavy equipment only once — for one knows where to go and what to do on arrival.

For the beginner in photography there is no question that the small camera is the best for the first one. Particularly, if one is to do one's own finishing, it is a great economy to work in small sizes at first. If one finds the work attractive, and aspires to make real pictures, the small camera will doubtless be soon outgrown; but if one does not wish to keep it as accessory to the larger one it can be traded in usually toward the new equipment, and it will have saved much more

than its value in the smaller cost of failures and wasted material. But the small camera has more than economy to recommend it to the novice. Its simpler mechanism is understood more easily, especially the universal focus, which eliminates what seems to be one of the most perplexing problems for most amateurs. This very thing will be a drawback later, when the artistic sense is more fully developed, and it becomes desirable to be able to sacrifice sharpness in the background for the sake of concentrating interest on some one object. However, at first it is an advantage to avoid the necessity to judge distance and the worryment of trying to remember always to set the indicator on the focusing-scale. Many have been the disappointments occasioned by forgetting to do this, or guessing wrongly as to the real number of feet between the object to be photographed and the camera. If enlarging is to be resorted to later, the fact that universal sharpness is assured is a great comfort, for although a "sharp-as-nails" negative may yield a very soft and diffused enlargement — if such is desired — it is impossible to obtain a clear and sharp enlargement save from a clear and sharp negative.

One disadvantage of the small camera is not a disadvantage of the camera at all, but of the user. Being so small, and the "ammunition" so comparatively inexpensive, its owner fails to take it seriously, and "shoots" everything in sight, without regard to what is capable of reproduction in the scene before him. The small camera is just as much governed in its product by the laws of optics and of light as is the larger instrument. If it is pointed upward the lines of buildings will converge toward the top in the small picture just as surely as in the large one, and a view — the chief beauty of which lies in its color — will be just as disappointing in one size as in the other. It is only by making exposures that one can determine for oneself the things which will make good pictures and those that will not. And if one is learning with a small camera this can be done with less trouble and expense than when expensive



plates are being sacrificed to gain the necessary knowledge. There is a great deal in learning what not to take. In handling a small instrument one learns soon what liberties may — and may not — be taken with the sensitive material. A small film will fog just as quickly as a large one, and one learns to load and unload in a safe light; not to put the camera down where the sun will shine directly on the little red window at the back; and to see to it that the film is kept tightly rolled on the spool after removing it from the camera.

The darkroom-light that has proved safe and adequate in handling films and photographic papers in small sizes will be equally safe for larger sizes. If one has any idea of keeping on with photography and working up to larger sizes eventually, it would be wise, in purchasing an outfit of trays, graduates, etc., to put in the larger sizes at first. Perhaps a developing-tray not much larger than the initial size would prove an economy in solutions, but for fixing, the large tray is preferable, since it allows more prints to be fixed at a time without undue piling up and lying together. The experience acquired in timing and developing the small prints is obtained at comparatively slight expense, and it is just as valuable as though learned with large pictures. The small camera may be looked upon as an efficient and reasonable instructor, and not to be ignored as an end in itself, when considered in conjunction with judicious enlarging.

KATHERINE BINGHAM.

### The Kodak Sky-Filter

To the beginner in photography the use of a ray-filter may look too complicated and mysterious to come within his ability, but in reality it is not so very complex, and with a little thought may be understood readily. One who has made many pictures must have discovered that blue photographs white, although to the eye it is rather a dark color. The sky appears of a deep shade contrasted with the white clouds, yet in one's pictures it photographs the same, and the clouds are lost. The reason is that the blue and violet rays are much more actinic than the green, yellow or red rays. While one is exposing for these slower colors in the landscape-portion of one's picture the sky becomes much overexposed and blocks up in development.

The ray-screen is a piece of yellow glass or film which, when placed over the lens, holds back the blue and violet rays and prevents their outstripping the others. The drawback to its use by amateurs is that, since the most rapid rays are excluded, the exposure is prolonged necessarily. The degree of increase in exposure depends on the depth of the yellow shade in the screen. The one most serviceable for ordinary landscape-work requires three times the normal exposure. Of course, this longer time requires the use of a tripod or other firm support for the camera, and it is likely to overcorrect and flatten out the distance by destroying plane-values.

However, there is on the market a filter that obviates some of these difficulties. It is known as the Kodak Sky-Filter, and is so made that one-half the circle of glass is clear and the other half has a yellow tint. This makes it possible to hold back the sky with-



"TAKE MY PICTURE!"

L. C. MACDONALD

SECOND PRIZE — BEGINNERS' CONTEST

out affecting the foreground, and without prolonging the exposure unduly. In strong light on snow or sea-views a twenty-fifth second exposure may be used, and one tenth or twelfth should be enough for ordinary views. The exposure is about doubled by the use of the filter. These exposures may be given with the camera in the hand; but anything over one-tenth requires that the camera be supported in some manner. There is a very compact and handy little clamp on the market by which any hand-camera may be fastened securely to a fence, tree or chair-back, or any convenient support. This — with the Sky-Filter — would add much to the possibilities of any amateur-equipment.

KATHERINE BINGHAM.

### That Poor and Much-Abused Replica

AN observant reader of PHOTO-ERA states that in the *Popular Science Monthly* for February, 1917, appears a picture of a woman and a lot of clay figures, beneath which is the following legend: "At the right of the sculptures is a replica of the old Windsor Hotel depicting the fire."

By and by, the repetition of a song, word, gesture or look — whether from the same person or not — will be called a "replica."



## ANSWERS TO QUERIES



*Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. If a personal reply is desired, a self-addressed, stamped envelope must be enclosed.*

**M. K. W.**—It is not necessary to cut apart roll-film negatives to dry. It is customary to keep the negatives in the strip until developing, fixing, washing and drying are finished, then each negative is cut off ready to print. Some prefer to cut the exposures in order to develop each negative by itself. However, this is of no particular advantage unless the various

**W. K. B.**—A shutter-speed of  $\frac{1}{300}$  of a second will stop all ordinary moving objects. Without a doubt the focal-plane shutter is the most efficient for high-speed photography. However, successful diving, running, baseball, football and airplane pictures have been made with a between-the-lens shutter working at a maximum speed of  $\frac{1}{300}$  of a second. In making speed-pictures with a between-the-lens shutter the photographer should select his angle of view carefully, so as to avoid having the subject pass the camera at right angles.

**A. G. S.**—For finishing prints with a glossy surface, a paper prepared with a naturally glossy surface should be employed. The most simple and satisfactory method to work is as follows: The prints, after fixing and washing, should be immersed in a formaline bath — formaline  $\frac{1}{2}$  ounce, water 5 ounces — for two or three minutes, washed for a quarter of an hour, and then dried. A glass, celluloid, or ferrotype plate is



CANINE SYMMETRY

J. BURKE

THIRD PRIZE — BEGINNERS' CONTEST

exposures are of such a nature as to require individual attention. The modern developing-tank and the correct amount of developer will usually take care of all ordinary variations of exposure.

**S. D. O.**—Whether or not the use of F/3.5 anastigmat lenses is to be advised generally is a debated question. The great speed of the lens permits exposures to be made under conditions which would render slower lenses useless. On the other hand, how many times does the average amateur-photographer attempt to make pictures under conditions which an F/6.3 or F/4.5 lens would not take care of efficiently? When all is said and done, the advisability of using an F/3.5 lens is a question to be decided by the individual. An important factor in the decision should be the ability of the amateur to use such a lens successfully.

washed and polished with a soft fabric, first rubbing on with a flannel a solution of 20 grains of beeswax in 1 ounce of turpentine. The print is soaked in water until thoroughly limp, and then a liberal quantity of water is thrown on the polished plate, and the print placed face downwards on the plate, care being taken that there is plenty of water between the two surfaces. The print is next firmly squeegeed into contact, interposing a sheet of rubber cloth between the print and the roller squeegee. When quite dry, the print will leave the plate very easily, and its surface will possess a high gloss. This surface is hard and durable, due to the employment of the formaline-bath, but it is well to back the print with a waterproof sheet so as to prevent the mountant from affecting the glaze. This method has proven to be efficient and eminently successful in actual practice.





## PRINT-CRITICISM



*Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, 383 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, plate or film, stop used, exposure, developer and printing-process.*

E. G. R.—The picture of an old log cabin, apparently deserted, with a mangled, leafless tree at the left and the chimney at the right, is somewhat stiff and unattractive in appearance. If the old domicile had been photographed from a different viewpoint, and on a bright rather than on a dull day, the result might possibly have been more attractive.

A. M. H.—In "The Charm of the Heights," a picture showing a group of women with a dog occupying a risky position on the top of some rocks at considerable height, the upright branch of a dead tree rising straight in the middle of the picture, is a serious detriment to the arrangement, and extremely inartistic. The print also shows considerable underexposure, hence the highlights on the rocks and the women's dresses, the excessive contrasts resulting in a spotty appearance. We would not have chosen this picture for its artistic possibilities, but rather as a record of an outing.

C. C. B.—In "The Little Haymakers" the two boys are walking out of the picture. The same subject could have been made with the boys marching toward the camera or a little bit to the right or left of the center; but when they are walking across the path of the camera and directly away from the center of interest, the composition suffers thereby.

R. A. W.—Your picture, "The Curving Bank," expresses a praiseworthy motive, which, however, lacks a definite viewpoint. The effect is rather decorative, and shows how beautiful the original view in the woods must have been. The scattered highlights on the tree-trunks, at the extreme right, and at the top, showing fragments of the sky, are somewhat distracting. By covering them up with each hand, you will quickly see how much better the picture will look were they subdued or even eliminated, which can be done easily in the negative.

F. P. M.—Your print of a cascade looks like an underexposed effort made by strong electric light, as the water and reflections are brilliant white without detail, and the contrast is so great as not to suggest any notion of reality or fidelity. The subject seems to be an attractive one. Please try again and see if you cannot obtain a picture with true color-values and gradations.

W. R.—The trouble with the head of the young girl is that the left eye is half closed, though the right one is less so. Whether this is due to the lighting or a physical defect is not clear. If the latter case, it would have been well to have posed the model in profile, and thus concealed the inequality of the eyes.

R. A. W.—The picture, "Licking the Kettle," is a good subject but very fuzzy. Is there any reason why it should be so? The figure is placed exactly in the picture-area. The background, consisting of trees, and through which the sky is visible, gives a very spotty and disquieting effect, which is not artistic or pleasing. This is a common fault with pictures of this sort. Just behind the boy's head appears to be what looks like a white tent, which could have been avoided

with a little care. The heterogeneous foreground, due to the usual concomitant of camp-life in the woods, could have been managed with better result had a little care been taken.

M. H. S.—Your winter scene, I am sorry to say, does not suggest the title. It is very flat, dull and monotonous throughout. A snow-scene should be somewhat brilliant, with due regard for the deep shadows. In your picture you have three snow-covered spruce trees in a horizontal row, which does not suggest good pictorial composition.

K. D. S.—The figure of the man at the edge of a pond, tending a wood-fire, is placed exactly in the center of the picture-space, dividing, at one side, the lake with its spotty mass of black and white, and at the right the brightly lighted shore. The background of woods is picturesque, and it is likely that a different viewpoint would have yielded a pleasing pictorial result.

L. C. C.—Your picture of a road along a river has the common fault of dual interest. Either the stream at the right should form the center of attraction, or the very pretty road at the left. I would suggest that you trim away, at the right, the view of the stream, leaving the view of the road, which, with about one inch cut away from the bottom of the print, will leave a complete and satisfying picture.

E. B.—The young lady, seated at a desk penning a letter to some dear one, evidently in her own boudoir, surrounded by favorite pictures, books, etc., is not a *portrait*, for obvious reasons. Very likely, if the young woman turned her face to the camera, it would present a far different aspect than from the present near-profile. It also might be classed as "Miscellaneous," with the possible title, "A Letter to Mother," or "A Letter to Him." This title could be varied. The picture is very meritorious, indeed, and worthy of recognition.

U. E. D.—A very stiff and angular pose. The fact that they are having their picture taken is evident in pose and expression. If the woman instead of the man had been sitting, and he leaning over to look at a book or other article in her hand, the stiffness might have been avoided. The camera was not held level, as the converging lines of the door-casing show.

O. P. D.—The pose and lighting of your home-portrait are excellent, but the prominent figure in the wall-paper and the parts of pictures included are very distracting. The head is also too low in the oval. A smaller oval would eliminate the pictures and improve spacing.

G. P. L.—An excellent handling of a difficult subject. It is unusual to see so luminous a light with transparent shadow in a portrait taken in full sunlight. The hat-brim has acted as a diffuser, and the light reflected from the white dress did the rest. However, a shorter exposure would have spoiled it. You have succeeded admirably in this.

P. R. C.—A splendid child-study marred seriously by the conspicuous white towel hanging directly over the child's head. Had it been laid on the shelf at the right of the wash-basin, it would have been in shadow, and so less white, and it would have aided in a triangular composition instead of prolonging a straight dividing line bisecting the picture.

D. C. P.—An admirable snow-picture. The glitter of the snow is remarkably well shown by the back lighting, and the converging shadows of the trees concentrate the interest admirably.

W. C. D.—The dead blackness of the background might be relieved by a little work on the negative. The figure itself and the expression are admirable. The lighting also is excellent. If the whole of the feet had been included it would have been better, as showing them only in part suggests amputation.

# Photo-Era Exposure-Guide

Calculated to give Full Shadow-Detail, at Sea-Level, 42° N. Lat.

For altitudes up to 5000 feet no change need be made. From 5000 to 8000 feet take  $\frac{3}{4}$  of the time in the table. From 8000 to 12000 feet use  $\frac{1}{2}$  of the exposure in the table.

Exposure for average landscapes with light foreground, river-scenes, light-colored buildings, monuments, snow-scenes with trees in foreground. For use with Class 1 plates, stop F/8, or U. S. 4. For other plates, or stops, see the tables on the opposite page.

\*These figures must be increased up to five times if the light is inclined to be yellow or red.

†Latitude 60° N. multiply by 3;

55° × 2; 52° × 2; 30° ×  $\frac{3}{4}$ .

‡Latitude 60° N. multiply by 2;

55° × 2; 52° ×  $1\frac{1}{2}$ ; 30° ×  $\frac{3}{4}$ .

§Latitude 60° N. multiply by  $1\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

§Latitude 60° N. multiply by  $1\frac{1}{4}$ ;

55° × 1; 52° × 1; 30° ×  $\frac{1}{2}$ .

## MONTH AND WEATHER

| HOUR                    | JAN.,<br>NOV., DEC. † |                |                |               |               | FEB., OCT.<br>‡ |                |                |                |               | MAR., APR.,<br>AUG., SEPT. ¶ |                |                |               |               | MAY, JUNE,<br>JULY § |                |                |               |                |
|-------------------------|-----------------------|----------------|----------------|---------------|---------------|-----------------|----------------|----------------|----------------|---------------|------------------------------|----------------|----------------|---------------|---------------|----------------------|----------------|----------------|---------------|----------------|
|                         | Bright Sun            | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun      | Hazy Sun       | Diffused Light | Dull           | Very Dull     | Bright Sun                   | Hazy Sun       | Diffused Light | Dull          | Very Dull     | Bright Sun           | Hazy Sun       | Diffused Light | Dull          | Very Dull      |
| 11 A.M. to 1 P.M.       | $\frac{1}{32}$        | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$ | $\frac{1}{32}$  | $\frac{1}{16}$ | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{1}{50}$               | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$  |
| 10-11 A.M. and 1-2 P.M. | $\frac{1}{25}$        | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{25}$  | $\frac{1}{12}$ | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{60}$       | $\frac{1}{30}$ | $\frac{1}{15}$ | $\frac{1}{8}$ | $\frac{1}{4}$  |
| 9-10 A.M. and 2-3 P.M.  | $\frac{1}{12}$        | $\frac{1}{6}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1^*$         | $\frac{1}{16}$  | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$  | $1^*$         | $\frac{1}{40}$               | $\frac{1}{20}$ | $\frac{1}{10}$ | $\frac{1}{5}$ | $\frac{1}{2}$ | $\frac{1}{50}$       | $\frac{1}{25}$ | $\frac{1}{12}$ | $\frac{1}{6}$ | $\frac{1}{3}$  |
| 8-9 A.M. and 3-4 P.M.   |                       |                |                |               |               | $\frac{1}{5}$   | $\frac{1}{2}$  | $1^*$          | $1\frac{1}{2}$ | $3^*$         | $\frac{1}{30}$               | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{3}$ | $\frac{2}{3}$ | $\frac{1}{30}$       | $\frac{1}{15}$ | $\frac{1}{8}$  | $\frac{1}{4}$ | $\frac{1}{2}$  |
| 7-8 A.M. and 4-5 P.M.   |                       |                |                |               |               |                 |                |                |                |               | $\frac{1}{20}$               | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{2}$ | $3$           | $\frac{1}{20}$       | $\frac{1}{10}$ | $\frac{1}{5}$  | $\frac{1}{3}$ | $\frac{2}{3}$  |
| 6-7 A.M. and 5-6 P.M.   |                       |                |                |               |               |                 |                |                |                |               | $\frac{1}{15}$               | $\frac{1}{8}$  | $\frac{1}{2}$  | $3^*$         | $1^*$         | $\frac{1}{15}$       | $\frac{1}{8}$  | $\frac{1}{4}$  | $\frac{1}{2}$ | $\frac{3}{4}$  |
| 5-6 A.M. and 6-7 P.M.   |                       |                |                |               |               |                 |                |                |                |               |                              |                |                |               |               | $\frac{1}{10}$       | $\frac{1}{5}$  | $\frac{1}{3}$  | $\frac{2}{3}$ | $1\frac{1}{2}$ |

The exposures given are approximately correct, provided the shutter-speeds are accurately marked. In case the results are not just what you want, use the tables merely as a basis and increase or decrease the exposure to fit the conditions. Whenever possible keep the shutter-speed uniform and vary the amount of light when necessary by changing the stop. Focal-plane shutters require only one-third of the exposures stated above.

**SUBJECTS.** For other subjects, multiply the exposure for an average landscape by the number given for the class of subject.

**1/8 Studies of sky and white clouds.**

**1/4 Open views of sea and sky;** very distant landscapes; studies of rather heavy clouds; sunset- and sunrise-studies.

**1/2 Open landscapes without foreground;** open beach, harbor- and shipping-scenes; yachts under sail; very light-colored objects; studies of dark clouds; snow-scenes with no dark objects; most telephoto-subjects outdoors; wooded hills not far distant from lens.

**2 Landscapes with medium foreground;** landscapes in fog or mist; buildings showing both sunny and shady sides; well-lighted street-scenes; per-

sons, animals and moving objects at least thirty feet away from the camera.

**4 Landscapes with heavy foreground;** buildings or trees occupying most of the picture; brook-scenes with heavy foliage; shipping about the docks; red-brick buildings and other dark objects; groups outdoors in the shade.

**8 Portraits outdoors in the shade;** very dark near objects, particularly when the image of the object nearly fills the plate and full shadow-detail is required.

**16 Badly-lighted river-banks,** ravines, to glades and under the trees. **48 interiors** not open to the sky. **Average indoor-portraits** in a well-lighted room, light surroundings.

**PLATES.** When plates other than those in Class I are used, the exposure indicated above must be multiplied by the number given at the head of the class of plates.



# For Perpetual Reference

As all the figures in the table opposite are based upon the use of stop F/8, or U. S. 4, it does not appear here among the ratios for other stops.

For other stops multiply by the number in the third column

|           |       |       |
|-----------|-------|-------|
| U. S. 1   | F/4   | × 1/4 |
| U. S. 2   | F/5.6 | × 1/2 |
| U. S. 2.4 | F/6.3 | × 5/8 |
| U. S. 3   | F/7   | × 3/4 |
| U. S. 8   | F/11  | × 2   |
| U. S. 16  | F/16  | × 4   |
| U. S. 32  | F/22  | × 8   |
| U. S. 64  | F/32  | × 16  |

## Example

The factors that determine correct exposure are, first, the strength of light; second, the amount of light and dark in the subject; third, speed of plate or film; fourth, the size of diaphragm used.

To photograph an average landscape with light foreground, in Feb., 2 to 3 p.m., bright sunshine, with plate from Class 1, R. R. Lens, stop F/8 (or U. S. 4). In the table look for "Hour," and under the column headed "Bright Sunshine," note time of exposure, 1/16 second. If a smaller stop is used, for instance, F/16, then to calculate time of exposure multiply the average time given for the F/8 stop by the number in the third column of the table for other stops, opposite the diaphragm chosen. The number opposite F/16 is 4. Multiply 1/16×4=1/4. Hence, the exposure will be 1/4 second.

For other plates consult the table of plate-speeds. If a plate from Class 1/2 be used, multiply the time given for average exposure, F/8 Class 1, by the number of the class. 1/16×1/2=1/32. Hence, the exposure will be 1/32 second.

## Speeds of Plates on the American Market

Class-Numbers. No. 1, Photo-Era. No. 2, Wynne. No. 3, Watkins

Class 1/3, P. E. 156, Wy. 350, Wa.  
Ilford Monarch  
Lumière Sigma  
Marion Record  
Seed Graflex  
Wellington Extreme

Class 1/2, P. E. 128, Wy. 250, Wa.  
Ansco Speedex Film  
Barnet Super-Speed Ortho.  
Central Special  
Cramer Crown  
Eastman Speed-Film  
Hammer Special Ex. Fast  
Imperial Flashlight  
Imperial Special Sensitive  
Seed Gilt Edge 30  
Wellington 'Xtra Speedy

Class 3/4, P. E. 120, Wy. 200, Wa.  
Barnet Red Seal  
Cramer Instantaneous Iso.  
Defender Vulcan  
Ensign Film  
Hammer Extra Fast, B. L.  
Ilford Zenith  
Paget Extra Special Rapid  
Paget Ortho. Extra Special Rapid

Class 1, P. E. 111, Wy. 180, Wa.  
American  
Ansco Film, N. C.  
Atlas Roll-Film  
Barnet Extra Rapid  
Barnet Ortho. Extra Rapid  
Central Comet  
Imperial Non-Filter

Imperial Ortho. Special Sensitive  
Kodak N. C. Film  
Kodoid  
Lumière Film and Blue Label  
Marion P. S.  
Premo Film-Pack  
Seed Gilt Edge 27  
Standard Imperial Portrait  
Standard Polychrome  
Stanley Regular  
Vulcan Film  
Wellington Anti-Screen  
Wellington Film  
Wellington Speedy  
Wellington Iso. Speedy  
W. & W. Panchromatic

Class 1 1/4, P. E. 90, Wy. 180, Wa.  
Cramer Banner X  
Cramer Isonon  
Cramer Spectrum  
Defender Ortho.  
Defender Ortho., N.-H.  
Eastman Extra Rapid  
Hammer Extra Fast Ortho.  
Hammer Non-Halation  
Hammer Non-Halation Ortho.  
Seed 26x  
Seed C. Ortho.  
Seed L. Ortho.  
Seed Non-Halation  
Seed Non-Halation Ortho.  
Standard Extra  
Standard Orthonon

Class 1 1/2, P. E. 84, Wy. 160, Wa.  
Cramer Anchor

Lumière Ortho. A  
Lumière Ortho. B

Class 2, P. E. 78, Wy. 120, Wa.  
Cramer Medium Iso.  
Ilford Rapid Chromatic  
Ilford Special Rapid  
Imperial Special Rapid  
Lumière Panchro. C

Class 3, P. E. 64, Wy. 90, Wa.  
Barnet Medium  
Barnet Ortho. Medium  
Cramer Trichromatic  
Hammer Fast  
Ilford Chromatic  
Ilford Empress  
Seed 23  
Stanley Commercial  
Wellington Landscape

Class 5, P. E. 56, Wy. 60, Wa.  
Cramer Commercial  
Hammer Slow  
Hammer Slow Ortho.  
Wellington Ortho. Process  
W. & W. Process Panchromatic

Class 8, P. E. 39, Wy. 30, Wa.  
Cramer Contrast  
Cramer Slow Iso.  
Cramer Slow Iso. Non-Halation  
Ilford Halftone  
Ilford Ordinary  
Seed Process

Class 100, P. E. 11, Wy. 3, Wa.  
Lumière Autochrome



## OUR ILLUSTRATIONS

WILFRED A. FRENCH



HE who has tasted the delights of a summer spent in the White Mountains of New Hampshire will recognize the picture of the Dixville Notch that adorns our June front-cover. It is the work of an ardent and capable amateur who lives on the spot and knows the character of the locality and its moods. Those who are familiar with this, one of the popular resorts of the White Mountains, declare that Mr. McLaughlin's view is admirable in every respect, and eminently representative of its natural beauty. No data.

The wood interior, by Theodore Eitel, that serves as this month's frontispiece, is one of a series of ten pictures that have been selected to illustrate a department of landscape-work treated by the Editor in a special article. All but four have appeared in previous issues, and are again presented as admirable examples in their respective fields. Mr. Eitel's picture, published in September, 1910, bore the title of "Solitude," and shows how the poetic feeling of such a quiet spot may successfully be interpreted. Those fond of trees as camera-subjects will derive pleasure and profit from the study of this pictorial masterpiece. Data: October, 10 A.M.; sun;  $6\frac{1}{2} \times 8\frac{1}{2}$  Premo camera; Bausch & Lomb-Zeiss, series 7A;  $19\frac{1}{4}$ -inch focus; stop, F/12.5; 1 second; Seed 26x; pyro; direct Platinotype print.

"The Tow-Path," page 285, has much pictorial beauty, and in most cases would be accepted as an artistic production. Were it a painting, and for sale, a clever auctioneer would get increasing bids by exclaiming, "Just see what you are getting — three distinct pictures on one canvas!" Strange as it may seem, painters are very prone to include two or more clearly defined views in the picture-area. This is done unconsciously, as the eye, fascinated by the beauty of a scene such as Mr. Cook has presented here, does not discover at once the superfluity of material; nor is it likely to notice that the bank in the foreground, and extending away from the camera, divides the view into two separate sections. Each of the three pictures defined by white lines is complete in itself, and it is a question whether the camerist would not prefer deliberately and knowingly to capture three distinct pictures at one exposure rather than to expend additional time, energy and sensitive material in making them separately. Data: June 8, 5 P.M.; bright sunlight; Wollensak Velostigmat; 10-inch focus, at F/8; 1 second; Hammer Blue Label; M. Q.; print on Cyko Platinum Normal.

In "Harvest," page 287, William Spanton demonstrates the happy use of figures in landscape. At the same time, he shows that white-shirted figures have no terrors for him. They seem to blend very easily with the somewhat high-keyed summer-view. Perhaps the sun at its meridian height favors this arrangement of light and shade. The disposition of the figures, too, deserves warm commendation. No data.

Dr. Ruzicka's "In Bronx Park," page 288, offers a distinguished application of the figure to a landscape. Here the model is arrayed in a light-colored costume, and what to many a camerist would prove an insurmountable obstacle is accomplished with convincing success. The sturdy tree-trunks at the left take a prominent place in the composition and serve as an admirable foil to the graceful figure which easily dominates the pleasing picture. Data: August, 4 P.M.; sun;

3A Kodak; stop, F/8; Eastman N. C. film; 3-time filter; 1 second;  $8 \times 10$  matte bromide enlargement.

Portraiture in the open sunlight is included among the problems difficult for the average camerist to solve; but Beatrice B. Bell, in "Jean," page 289, has produced a sunny portrait, delightfully soft, clear and plastic, that would be well-nigh impossible in the best-arranged studio. The delicate gradations and the atmospheric quality that distinguish this *al fresco* portrait deserve high praise. Data: Entirely in the open; full sun; No. 4 Cartridge Kodak; R. R. lens, at U. S. 4; instantaneous exposure; Eastman N. C. film; pyro, tank; Special Portrait Velox print.

Among the many superb views of the Pacific Coast that Harold A. Taylor has produced, none could possibly surpass his "The Breaker," page 290, for graphic power and pictorial beauty. The realism of the glistening mass of spray, the striking fidelity of the tone-values, the correctness of perspective and artistic proportions are praiseworthy qualities that even a marine-painter — hostile, as he generally is, to photography — would concede to Mr. Taylor's achievement. Data: Afternoon; sunlight;  $5 \times 7$  Graflex;  $8\frac{1}{4}$ -inch Ic Tessar, at F/11;  $\frac{1}{100}$  second; Orthonon plate; pyro-metol — hydro developer;  $5\frac{1}{2} \times 9$ ; glossy bromide P. M. C., No. 4 print. Superb enlargements on matte paper for sale by Mr. Taylor, Coronado, Cal. He is an eminently successful professional.

The field of animal-photography covers a wide range of subjects. The four-footed variety will claim the amateur specialist's attention to the greater degree, and there will be cattle, sheep — and mules, of which last-named, Dr. Mansfield, the author of a very readable story on photography in the camp (found elsewhere in this issue), contributes an excellent picture; page 291. Data: Summer of 1916, afternoon; sunlight; Vest-Pocket Ansco,  $2\frac{1}{4} \times 3\frac{1}{2}$ ; Modico lens, at full aperture;  $\frac{1}{100}$  second; Speedex film; pyro-glycin; direct Artura print.

One of the pictures that contributed not a little to the prestige of the late, lamented Chester A. Reed, as a successful bird-photographer, is the group of young kingfishers, reproduced on page 292. Mr. Reed was so ardent a lover of birds and flowers, that he devoted his life to this field of nature-study and published about a dozen little volumes, pocket-size, with numerous color-plates, that enjoy great popularity. See "Flower-Guide — Wild-Flowers East of the Rockies," "Nature-Studies in Field and Wood," "Camera-Studies of Wild-Birds in Their Homes" and "Bird-Guide," published by Doubleday, Page & Co., Garden City, N. Y. His illustrated article, "How Wild-Birds Are Photographed," appeared in May PHOTO-ERA, 1910.

The extremely graceful arrangement of Golden-Rod, page 293, does credit to George Alexander, the ever-felicitous pictorialist. The intimate personal touch is a charming characteristic of this artist's work. His present flower-piece will serve as an example worthy to be studied and followed by camerists to whom the wild-flowers of field and wood will not appeal in vain. Data: Made in an ordinary room, on a rainy day;  $5 \times 7$  hand-camera; R. R. lens; F/32; 2 minutes; Seed's L. Ortho; pyro.

A very pleasing composition — a flower-study from



versatile William S. Davis, page 294 — concludes this series of illustrations, which cannot but assist the ambitious picture-maker. Data: Near noon in November; soft light from east window; about 18 inches from subject; Ilex Anastigmat; stop, F/8; Ingento A ray-filter; 4 x 5 Roebuck Double-Coated Ortho; Edinol-hydro developer.

What camp-life offers the camerist in the form of interest and variety of subjects, Dr. Mansfield has suggested in his engrossing paper and the accompanying illustrations. The latter evince the author's true appreciation of their artistic possibilities. Some of the prints were soft and atmospheric in tone; others were brilliant, with marked contrasts, and all were reproduced according to the originals.

By this time, PHOTO-ERA readers will have recognized the comprehensive, many-sided talent of William S. Davis as a photographic illustrator. The pictures that accompany his admirably instructive article in this issue possess a diversity of pictorial interest that is as rare as it is pleasing. Singularly enough, most of them serve as fitting examples to certain outdoor camera-activities to the Editor's suggestions on the subject of artistic pictures (pages 284 to 294) — marine, flower and animal photography. Data: "Sunlit Ice" — February, 4.30 p.m.; the effective aperture of a triple convertible R.R.; back-combination, used wide open; stop, F/15; Ingento A ray-filter; double-coated Ortho;  $\frac{1}{2}$  second. "The Ferry-Slip" — August, at noon; bright light; lens at F/6.3; ray-filter; Inst. Iso plate;  $\frac{1}{25}$  second. "The Lightship" — Made from steamer, at 6 p.m., in August; lens at F/8; Cramer Inst. Iso;  $\frac{1}{100}$  second. "Chinese Lilies" — February afternoon; diffused sunshine outside; west-window, covered with two thicknesses of cheese-cloth; lens at F/16; 4 minutes; two screens on lens, increasing normal exposure eight times; Roebuck double-coated Ortho. "In Quiet Pastures" — November, about 3.15 p.m.; soft sunshine; lens at F/6.3;  $\frac{1}{25}$  second; Cramer Inst. Iso.

Of the numerous examples of the Cadby individuality in portraiture that appeared in these pages for many years, the little girl having a light repast — page 279 — is probably the most charming. It is interesting to note the many imitators of the Cadby manner, but, simple as it is, these efforts leave the Cadbys, our esteemed London correspondents, unsurpassed in their delightful specialty. No data.

The pic peopled with excursionists awaiting the last boat, as pictured by Charles G. Wells, page 282, is a worthy subject for the camera. The picture, made in the early evening, is filled with suggestion, and invites meditation. This subjective interpretation of an unconventional theme evinces the artistic temperament of a camerist new to PHOTO-ERA readers, and whose further pictorial contributions to these pages will be heartily welcomed. Data: September, 6.50 p.m., after sunset; 4 x 5 Adams Reflex camera; Pinkham & Smith 8-inch Semi-Achromatic Doublet, at F 6;  $\frac{1}{2}$  second; Cramer Iso Inst. Double-Coated; print, 8 x 10 enlargement on Prof. Cyko Plat.

### Advanced Workers' Competition

NOT for many years have the entries in a winter-subject been so numerous and of such strikingly artistic merit as in the present competition. The task that confronted the jury was therefore a very difficult one, but it was met with the usual conscientious care and strict impartiality. The picture of a jumping skier, by Albert B. Street, page 297, was well conceived and capably carried out. It reminds one of the famous winter-sports in Switzerland, where, alas, only anxiety and distress prevail at present. Nevertheless, even in

times of peace and prosperity, the Swiss winter-pastimes have been rivaled in Canada and the United States, as evidenced in the present instance. Mr. Street's picture was made according to legitimate methods — so the camerist assures us. The proportions, values, perspective and depth of focus are praiseworthy, and the illusion of the skier's feet very effective. Data: February 10, 1917, 11 a.m.; good sunlight; Graflex camera,  $3\frac{1}{2}$  x  $4\frac{1}{2}$ , long focus; Bausch & Lomb-Zeiss 7-inch Tessar Ic; stop, F/4.5;  $\frac{1}{800}$  second; Wellington Extreme plate; hydro-metol, in tray; print, Contrast Cyko Enlarging Plat.; developed with hydro-metol.

The curious physical structure of the snowy mountains in Mr. Begg's winter-scene, page 299, was the subject of much conjecture until the data arrived and cleared the situation. The mountains proved to be hillocks of sand covered with snow — sand-dunes in winter! Nevertheless, the effect produced by the action of the wind and the bright sunlight is quite remarkable, and, as a whole, the picture is impressively beautiful. Data: February; intense sunlight; lens at F/11; 3-time color-screen;  $\frac{1}{2}$  second; Cramer Medium Iso; Edinol; enlarged on Monox No. 5 Hard.

In his mid-winter scene, page 300, Alexander Murray has evaded the hackneyed up-hill, foot-worn path in the deep snow. The furrowed road converges interestingly toward the summit of the hill, beyond which the horse and sleigh are about to disappear. The picture is well planned, with an interest that is diversified but not excessive. I rank this as one of the most satisfactory entries that Mr. Murray has made to these competitions. Data: February 17, 3 p.m.; sunlight; Premo, 4 x 5; B. & L. Special Universal lens,  $6\frac{1}{2}$ -inch focus; stop, F/16; ray-filter;  $\frac{1}{2}$  second; Cramer Iso Medium; Amidol; print, P. M. C. Bromide No. 2.

In his impression of a snow-storm in the city, W. R. Bradford has certainly struck level. It is a masterpiece, pure and simple, and, though done in monochrome, would doubtless be preferred, by many art-lovers, to one of Childe Hassam's canvases of a similar theme. This picture has been the subject of much controversy, several critics contending that the driving snow-flakes were the work of chicanery, but the artist silenced them quickly and permanently with the truthful statement that the graphic result was due to straight photography — no faking! Data: March, 1 p.m.; dull day; Watch-Pocket Carbine camera; Zeiss Triotar lens, F/6.3; 3-inch focus; Eastman N. C. film; pyro; lens at full aperture;  $\frac{1}{100}$  second; enlarged negative; print on Special Portrait Kruxo Soft. Mr. Bradford states, further, that this unusual rendering of snow-flurries is due, he thinks, to the combination of a short-focus lens and the slow shutter-speed, thereby allowing the snow-flakes to register movement on plate. At any rate, a staff-photographer exposed for the same picture, using a Graflex, and 7-inch lens at F/5.6,  $\frac{1}{400}$  second, and obtained nothing at all comparable with his effort.

### Beginners' Competition

THE chief merit of Mr. Matson's picture, page 304, is its beautiful tonal quality and atmospheric perspective, also its simplicity of composition. Data: November; cloudy; rapid orthographic lens; stop, F/8; 2 seconds; Standard Orthonon; pyro; contact print on Buff Cyko.

As an ingenuous and artistic interpretation of child-life, page 305, Mr. MacDonald's makes a successful appeal to every true art-lover. It is simple and unaffected in character, and technically uncommonly good, the illumination throughout being worthy of the highest professional skill. Data: June, 10.30 a.m.; bright sun;

(Continued on page 316)



# ON THE GROUND-GLASS

WILFRED A. FRENCH



## Counting Seconds

THE enthusiasm of the English pictorialists is unbounded; it takes the palm. To think that, amid the troubles arising from the Linked Rings' exhibition — the Salon; the interest created by the recently organized Salon des Réfusés; the untoward events in the Balkans; the prospective absorption of Denmark (Queen Alexandra's native land) by Germany, and, indeed, several clashes with the Kaiser's aggressive foreign policy, English journals calmly discuss such a trivial affair as "counting seconds!" Our venerable and esteemed cotemporary, the *British Journal of Photography*, treats this profound and intricate problem with exhaustive zeal, taking its cue from the *Photographic Monthly*, which recommends that, while pressing the bulb at the psychological moment, the martyr-camérist hum a popular march-tune, and to its rhythm count the time aloud; that is to say, 1, 2, 3, 4; 2, 2, 3, 4; 3, 2, 3, 4, etc., allowing one figure to each quarter-second. Expatriating upon this brain-racking stunt, the *British Journal* advocates the substitution of the waltz-measure, as the dual process of humming and counting in this case yields whole seconds. Delightful! But what becomes of the exposure, amid the ecstasy of reveling in the melodic strains of the "Merry Widow Waltz" or those of the "Beautiful Blue Danube"? The very thought sets our own pen a-dancing.

Enchanting as is this method, however, it fails to satisfy Frederick H. Evans, the prince of architectural pictorialists and a musician of marked ability. In a letter to the editors of the *British Journal* he urges his preference in favor of standing with feet apart and gently rocking from foot to foot, thus converting himself into an accurate pendulum. He states that he has often counted to a full minute in this way, quite correctly — to another's testing — without seeing the watch-face. Mr. Evans' principle may be more practical, but it is open to a serious objection — it eliminates the musical element, and thus deprives certain camérist of a much-needed diversion. Besides, there is the danger of the performing camérist being mistaken by an observant passer-by for a feeble-minded person. Then, too, there remains the terrible suggestion — we beg Mr. Evans' humble pardon — of the automatic, walking toy, known in the streets of Berlin, several years ago, at Christmas-time, as "Der kleine Cohn." No doubt this fascinating manikin was equally familiar to Londoners, at Yuletide, when continental toys are in great favor.

If the musical sense of the English camérist must be appeased, why not turn to nature's own themes? There is Bob White, the cuckoo, the whip-poor-will — song-birds whose calls are in regular cadences, and may well serve the practical purpose of determining those elusive intervals of time, seconds. Still, one of the easiest and most unobtrusive ways of all is to hold the bulb in the left hand, placing a finger of the right hand upon the pulse of the left wrist. In any well-regulated person who remains calm even at the sight of a glorious scene to be captured by the camera, the pulse-beat should be about one per second.

To those who desire a simple and inexpensive device for correctly measuring prolonged exposures, we recommend a pendulum that any one can make — a piece of fish-line, ten inches long, with one end passed through

a round half-inch leaden bullet and secured by a knot, and,  $9\frac{1}{2}$  inches away, marked by another knot, the distance from this knot to center of bullet to measure exactly  $9\frac{3}{4}$  inches. Held with thumb and index-finger, just above the knot, and allowed to swing to and fro, each beat of this improvised pendulum will accurately mark half-seconds.

There is one thing to be said in favor of the ingenuity of our brother-editors in urging their readers to adopt methods which, to us ultra-practical Americans, seem a trifle lazy. The modern English school of photography is certainly very bountiful in its pictorial production; and if all these beautiful, charming pictures — landscape and genre — are in the least due to seemingly intricate methods of counting seconds, then it might be well for workers in other countries to follow suit. The end would seem to justify the means.—W. A. F.

Subscribers have written to the Editor that they have read many articles in PHOTO-ERA on the subject of making artistic pictures without finding even a paragraph devoted to an easy method to measure prolonged exposures. One of them requested that an article on this subject, one that appeared in PHOTO-ERA about ten years ago, be reprinted. This has been done. Incidentally, the reader will have noted the singular timeliness of its introduction regarding the present European war.

## The Disenchanting Stenographer

SHE came to substitute for the regular stenographer, who was away ill. She was plausibly intelligent and very speedy; but her spelling was unsafe — in fact, precarious — and this led to her undoing. Among the orthographical gems she left, after a brief and hapless stay, is the following paragraph of a letter in which I explained to a subscriber the make-up of an army operating against the Russians in Rumania:

"According to press-reports the army now opposing the Rushians in Roomania, and referred to as the Tootan army, is hetrogenius in character and includes Persons, Saxons, Privarians, Austriches, Checks, Teroljians, Buljarians, Bosses and even some Romans."

I had dictated Russians, Teutons, Prussians, Bavarians, Austrians, Czechs, Tyroleans, Bulgarians, Bosnians and Rumanus.

## The All-Around Photographer

A CORRESPONDENT facetiously asks how a photographer, who, in the ordinary way, pictures but *one side* of a person or object, or rather that which is visible to the eye of the camera, can truthfully call himself an *all-around* photographer! I think that, in a literal sense, the point is well taken. It is a credit to his observant eye and active mind. Perhaps the qualification "general" would be preferable, although the term "commercial photographer" has been generally adopted to mean the many-sided professional who is engaged in every kind of photography — copying, home-portraiture, flashlights, photo-finishing, etc. If, however, the commercial photographer is exceedingly rotund — *in fact*, resembles the Everett True type — the term "all-round" would seem eminently fitting.





## EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions  
and Conventions are solicited for publication



### Photographers, Attention!

As the president of your National Association, I feel it my privilege and duty to call your attention to existing conditions in these United States.

We, the people, through our President and Congress, have found it necessary to declare that a state of war exists against the Imperial Government of Germany.

It is not for us to quibble over pros and cons — it is for us to stand by and to uphold the action of our Government in whatever manner we find it possible so to do.

Let us refrain from, and discourage, petty criticisms of any actions taken by the men we have vested with the power to act for us, and in whatever way possible let us prove ourselves true and loyal citizens of the commonwealth in which we live.

RYLAND W. PHILLIPS,  
*President of the P. A. of A.*

### The New England Photographers' Association

THE New England Photographers' Association will hold its convention in Infantry Hall, Providence, R. I., from September 25 to September 28, 1917.

The convention is being planned along practical lines. No feature will be introduced in the program except that which will assist the photographer in his studio work, with the exception, of course, of the entertainment part of the program, which is most attractive.

A. E. WHITNEY, Secretary.

### Picture Exhibit at the National Convention

THE picture-exhibit at the National Convention in Milwaukee this year is planned to serve two purposes: First, to furnish those who send pictures to the exhibit such information and constructive criticism as will enable them to better the general quality of their work. Second, to show those who come to the convention some of the best work that is made in America to-day.

The primary consideration in accomplishing this aim is the selection of judges who will be able to analyze the pictures that are submitted and who will be able to put into concise and positive terms the points that they find in the pictures. Although the board is not ready to announce the names of the judges, the president is in communication with three competent men who, if their services can be procured, will comprise one of the most competent juries that ever passed upon the pictures at a National Convention.

These judges will have charge of the portrait-class. Ratings will be given on the four following subjects: Composition, Tone-Values, Background-Treatment and Exhibition-Effect. Twenty-five points will be allowed for each classification.

There will be two judges for the commercial class. They will furnish ratings on the following subjects: Utility, Composition, Lighting and Technique. Twenty-five points constitute perfection in each classification.

The judges will divide the pictures in the portrait-class into three divisions. Those rating sixty percent or more will be placed in Class A, and from this class pictures, not to exceed twenty, will be selected for the National Salon, and certificates of merit will be awarded

to those whose pictures are selected. Pictures rating between fifty and sixty will be placed in Class B. Those rating below fifty will be placed in Class C. Classes A and B will be catalogued.

This classification is arranged to overcome the objection made at some of the recent conventions where all of the pictures have been hung together, so that it was impossible for those who viewed the exhibit to determine which the judges considered the better pictures.

At the last convention only three pictures rated eighty percent or better. The highest rating given was eighty-three. There was a total of 155 pictures that rated sixty percent or more, and salon honors awarded to pictures rating as low as seventy percent. Therefore, one can see that the judges have used very close markings, and have established a high standard, to be attained only by careful selection on the part of the exhibiting photographers.

It is suggested that only those pictures which have been made since the last convention be entered in the exhibit this year. This suggestion is made because the board believes that a ruling of this kind will result in the greatest good to each exhibitor.

Special distinction will be given the pictures in Class A. Screens will be constructed so that the pictures in this class may be shown to the very best advantage.

Prepare your prints now or, at least, begin to prepare them, and when you have them ready send them to Photographers' Association of America, care of the Auditorium, Milwaukee, Wis., transportation-charges prepaid. Do not put this matter off until the last minute and then send in any old thing you have on hand. If you send your exhibit in now, it will be well taken care of until convention time. You may enter three pictures in the portrait-class and three in the commercial class. There is no ruling as to size or style, and they may be framed or unframed, just as you see fit.

All exhibits must be packed and marked carefully. The P. A. of A. will not be responsible for lost exhibits.

### The Many-Sided Dr. Mees

REFERRING to the dinner given in honor of Dr. C. E. Kenneth Mees, at the Boston Art Club, last February, the *British Journal* wonders what the doctor remarked about Art. Simple enough — about the art of photography, of course.

### F. H. Evans' Artistry

THE following tribute to the genius of F. H. Evans, master of chiaroscuro in architectural interiors, has been paid by the *British Journal*. "Clear-eyed and single-minded, Mr. Evans' work is eminently sane, and none of the adventitious aids of the charlatan has been impressed into his service. He has ever been his own severest critic, and his magnificent contributions to the art of photography constitute his reward and our delight. Mr. Evans was not only the pioneer of pictorial architectural photography, but he remains to-day the foremost practitioner of this branch of the art. He embodies in his work what is possible in a photograph, but what is not common to photography."

## Ohio-Michigan Photographers' Association

THE convention of the Ohio-Michigan Photographers' Association is to be held at Cedar Point, Ohio, July 31 to August 3. Attractive prizes are offered, and trophy cups are to be given to members from Ohio, Michigan and Indiana.



DIAMOND MEDAL OF HONOR

The *First Grand Prize*, open to the world, is The Daguerre Memorial Institute Prize, which will be a Diamond Medal of Honor.

### CONDITIONS OF AWARD

1. No picture shall be passed for this honor that is not properly titled.
2. Should the excellence of the picture chosen for honor be judged not to be equal to the one chosen as best at our last annual meet, then the Trustees reserve the right to retain the medal.
3. Pictures shall be passed upon by two distinct sets of judges, the one selecting a number of three to five pictures, the other selects the one. Any false claim made by winner of medal forfeits all honors, and at the request of Trustees the same shall be surrendered.
4. All pictures considered of sufficient merit will be selected to adorn the walls of the Daguerre Memorial Institute and will be awarded a certificate. All selected pictures must be framed at the expense of the exhibitor.

*Second Grand Prize*, Fifty Dollars in Gold.

### SPECIAL PRIZES

Open to Ohio, Michigan and Indiana

Trophy Cup. J. C. Abel, for best exhibit made by studio in business five years or less.

Trophy Cup. Allison & Hadaway, for best exhibit made with electric light.

Trophy Cup. Wollensak Optical Company, for best exhibit made with Wollensak Lenses.

Trophy Cup. The Indiana Association, for best exhibit made by photographer in Ohio, Michigan or Indiana.

Further particulars may be obtained from Mr. A. E. Riley, Secretary, Coshocton, Ohio.

## The Clarence H. White School of Photography

NESTLED among the Berkshire Hills of Northern Connecticut is Canaan. Here Clarence H. White has established his School of Photography for the summer-session of 1917. A more pictorially beautiful spot, in New England, is not to be found than this country of rolling uplands, streams, rugged mountains, schools, farms and Colonial buildings. The summer-session begins July 9 and ends August 18. Amateur and professional photographers who are eager to improve their work, and at the same time enjoy a vacation amid ideal surroundings, should write for the handsomely illustrated prospectus which describes the school, curriculum, excursions, exhibitions, terms and accommodations. Many of the foremost amateur and professional pictorial workers of the country owe much of their success to the instruction received at the White School. See advertisement in this issue.

## Detroit Camera Club Show on Tour

AT the annual meeting of the B. Y. M. C. Union Camera Club, No. 48 Boylston Street, May 1, the following-named members were elected to office: W. E. Burwell, president; E. C. Howard, vice-president; H. C. Channen, treasurer, and Louis Astrella, secretary. After the transaction of other business, the members and guests inspected a loan-exhibit of the Detroit Camera Club consisting of forty artistic prints. One was impressed by the originality of the pictorial subjects, directness of presentation and uniformly high artistic quality. Among other prints of noteworthy merit were "The Doorway," "The Fortune-Teller" (a strong profile) and "Portrait of my Father," by Philip McCutcheon Armstrong; "The Church-Door—Norway" (published in PHOTO-ERA, August, 1916), by Helen E. Cary; "The Interrupted Drink" (deer at brook in midwinter), by Harold DuCharme; "On the River-Front," by Frank E. Erin; "Morning-Mists—Belle Isle," "The Beach-Bole" and "October-Morning—Belle Isle," by Dr. O. E. Fischer; "The Courthouse" (published in PHOTO-ERA, August, 1916), by O. H. Lindstead; "Portrait" (profile), by W. A. Lindstead; "March," "The Ferry" and "The Orchard" (three trees in admirable perspective), by Edmond J. Schaefer. We understand that, after one week's stay in Boston, this collection was returned to Detroit and thence again sent on a long journey to other large cities. Any responsible camera-club not on the list will do well to get in touch at once with O. H. Lindstead, Kresge Building, West Grand Circus Park, Detroit, Mich., and arrange for the loan of this or a similar set of prints. The B. Y. M. C. Union Camera Club is to be thanked for the opportunity it afforded its members and friends to view this admirable collection of pictures.

## Frederick Gutekunst

FEW photographers have come into contact with a greater number of prominent persons than the late Frederick Gutekunst. During his sixty years of photographic activity he received at his studio presidents, diplomats, authors, scientists, statesmen, artists, actors and well-known business men. Mr. Gutekunst was eighty-five years of age at the time of his death.



In times like the present, the professional humorist may be expected to commit an offense like the following: "Lizzie! Run quick to the drug-store with this prescription for your sick brother. And tell the man that Jim belongs to the preserves!"





## WITH THE TRADE



### Auto-Fixt-Focus Camera Now Supplied with Wollensak Lenses

THE success of the Auto-Fixt-Focus Camera, fitted with Goerz Celor F/4.8 and Goerz Dagor F/6.8 lenses, has been so complete that the manufacturers, Herbert and Huesgen Company, 18 East 42d Street, New York City, have decided to issue the same camera equipped with Wollensak lenses. This additional equipment allows a scale of prices which should appeal to amateur photographers. The Auto-Fixt-Focus camera may now be obtained with Wollensak Velostigmat F/7.7 and Ilex General shutter, speeds  $\frac{1}{5}$  to  $\frac{1}{100}$  of a second, \$40; with Wollensak Velostigmat F/6.3 and Ilex Universal shutter, speeds 1 to  $\frac{1}{150}$  of a second, \$50; and with Goerz Celor F/4.8 or Goerz Dagor F/6.8 and Ilex Acme shutter, speeds 1 to  $\frac{1}{300}$  of a second, \$75. An interesting and well-illustrated booklet describing in detail the Auto-Fixt-Focus camera may be obtained from the manufacturers.

### A New Photo-Supply Company

THE recently organized Bass Camera Company has purchased the business and good-will of the old-established firm of Phil. G. Luber, 109 North Dearborn Street, Chicago. The officers of the new company are Charles Bass, president; Ben Chimberoff, vice-president and Joseph Faroll, treasurer. A complete line of cameras, lenses, motion-picture equipments and photo-supplies will be carried in stock, and a very liberal policy of fair dealing is announced to be in force with regard to the purchase and exchange of cameras and lenses.

### New Universal Camera Catalog

BURKE & JAMES, INC., of Chicago—trade agents for the Universal Motion Picture Camera—have issued a new catalog describing the latest model. Without a doubt this camera at \$300 represents the very best value in anything at the price now obtainable in the motion-picture field. It is an especially desirable machine for motion-picture weekly men, advertising, commercial film-producers, newspaper-photographers and well-to-do amateurs. A copy of the new catalog will be mailed to any of our readers on request.

### The New Kodak and Premo Catalogs Are Ready

AMATEUR and professional photographers should call at their dealers' for the new Kodak and Premo catalogs now ready for free distribution. The high typographical standard has been maintained successfully despite present conditions, and the contents of both catalogs are of unusual interest and value. The new goods described demonstrate again the ability of the Eastman Kodak Company to simplify photography for the novice. The revived interest in Stereo-photography has led to the addition of a Stereo Kodak to the already very complete line of equipments. Among the accessories are several new items of practical value to amateur and professional workers who appreciate efficiency and service in the darkroom. Both catalogs should be read thoroughly—the time will be well spent. All photographers should be up-to-date.

### Picturesque New England

THE pictorial advantages that the New England states Maine, New Hampshire and Vermont offer to the tourist, vacationist and camerist are so well known that repetition here is unnecessary. The food-shortage has not affected New England as much as in the West, where hotel-prices are almost prohibitive, but in the extreme East they continue moderate. Travel-facilities, in this relatively small territory, are ideally convenient, accommodations ample and excellent, and the climate delightful. These advantages, not found elsewhere in this country, have always attracted visitors in large numbers from nearly every section of the United States, the European War having seemingly made no difference. Greater Boston, with its many historic landmarks and associations, and pleasant summer-weather, will always be a popular starting-point to the mountains, lakes and streams of Maine and New Hampshire. Those who have yet to taste the delights of summer in this enviable region should send for a free copy of the 1917 edition of "Where to Stay in Vacation-Land," and map, to Advertising Bureau, Room 208, North Station, Boston, Mass.

### Two Valuable Eastman Booklets

REVISED editions of "Enlarging" and "Eastman Portrait Films"—two booklets issued by the Eastman Kodak Company—are now ready for free distribution. Photographers should obtain copies and avail themselves of the up-to-the-minute information which these booklets contain.

### Reorganization of the Central Dry-Plate Company

MR. F. ERNEST CRAMER, officially associated for many years with the G. Cramer Dry-Plate Company, severed his connection with that firm March 1, 1917, in order to assume the presidency and active management of the Central Dry-Plate Company. His reasons for making this change, which went into effect April 2, 1917, were purely personal, and were made only after a careful investigation of the affairs of the Central Dry-Plate Company. Although no longer identified officially with the Cramer Company, Mr. Cramer still remains a director. The reorganized Central Dry-Plate Company has recently purchased the plant and property formerly occupied by the M. A. Seed Dry-Plate Company (at Woodland, Mo.), which is now being altered to meet up-to-date requirements. As soon as the necessary improvements in the newly acquired plant shall have been completed, the Central Dry-Plate Company expects to make another announcement.

### Raising False Hopes

THE report intended to be hailed as joyful news by manufacturing opticians, throughout the land, that the secret of making optical glass of the sort used in field-glasses, range-finders and periscopes—a product hitherto imported from Germany—had been discovered by the Bureau of Standards, Washington, has found little credence. Similar reports, emanating from

the same source, to the effect that certain rare dyes, chemicals and acids — impossible to obtain from Europe, on account of the war — were being manufactured by government-experts, made a deep impression at the time; but as to the results — like spirits, they seem to have melted into thin air. When the great war shall have ended, industrial rivalry will assume its wonted activity; and whatever country produces the best of its kind will reap the benefit.

### A Store-House of Practical Photographic Knowledge

MANY of our new subscribers wonder why one single copy of PHOTO-ERA does not contain all the practical photographic knowledge of which they are in search. Anticipating just such an unreasonable attitude among certain budding and ambitious camerists, we went to some pains, last summer, selected the very best articles from the pen of authoritative writers that appeared in PHOTO-ERA during the past ten years, classified them under different headings and printed the list in the issues of June, July, August and October of 1916, in each case giving the date and issue of the magazine containing the article referred to.

We can conceive of no better way to familiarize new workers and new readers with good, practical articles written by English, German and American experts of the highest reputation. Although it is customary for publishers to charge an advanced price for back-numbers of their publications, PHOTO-ERA offers these back numbers for 15 cents each, including those that contain the classified lists.

### John Butler Makes a Correction

WITH regard to his illustrated article, "A Practical Home-Made Electric Printing-Box," in the April, 1917, issue, Mr. Butler hastens to make a correction in the diagram showing the switches used with the printing-box. According to this diagram, the switch is so connected that turning it to the "on" position would cause a short circuit and prevent the operation of the apparatus. The two switch-wires should not bridge the entering wires, but go to the wire leading to the lamps; this latter wire should be cut between the places where the switch-wires join it. Operating the box as shown in the diagram would result in blowing the fuses, thus rendering the apparatus useless and causing a grave danger of fire.

### Color-Sensitive Plates

WHETHER the appearance of Dr. Atkin Swan and Mr. A. L. Coburn at the Royal Photographic Society to defend the use of the orthochromatic plate was arranged for the purpose of creating a diversion or a discussion, it certainly fulfilled the first of these objects, though as to the second it cannot be said to have yielded very much on one side or the other. Dr. Swan gave some useful hints on the subject of filters, emphasizing the importance of seeing that these were correct in color and also optically flat. Mr. Coburn dealt more particularly with the value of the color-sensitive plate in the rendering of skin-texture. It was said in the text-books that orthochromatic photography made less retouching necessary; but surely, with a proper lens of the soft type, a color-sensitive plate, and careful lighting no retouching at all should be required. In his own studio, he added, the walls and carpets were of a light yellow brown, which was so reflected on the sitter that a screen was hardly necessary.

*Amateur Photographer.*

### Our Illustrations

*(Continued from page 311)*

#### Beginners' Competition

taken in shade on porch; 5 x 7 Conley Double Extension; 8½-inch Turner-Reich lens, at F/6.8; ½ second; Standard Ortho; Duratol, in tray; P.M.C. enlargement; redeveloped.

The portrait of a setter, page 306, is almost human in expression. Its technical excellence redounds to the credit of its youthful author. Data: July, 1916; good light; taken on back-porch; No. 3A Autographic Kodak, 3½ x 5½; lens, F/7.7; stop, F/8; used back combination of lens and portrait-attachment; ½ second; Seed's Standard; pyro; enlarged on P. M. C.

#### How To Get Strategic Photographs

IN the English press, the following advertisement has appeared:

"WANTED, for a Government-Department, Photographs and Picture-Postcards of places, including bridges, railway-junctions, rivers, canals, factories, etc., in the portions of Belgium and Northern France now occupied by the Germans. Will the owners of such pictures who are willing to present them kindly forward them to Box No. 1045, care of Messrs. R. F. White and Son, General Advertising Agents, 33, Fleet Street, E. C. 4."

If, now, our own government should happen to be in need of photographs of strategic points, even including some that are this side of the Atlantic, it may know where to find them. To obtain them, however, is quite another matter.

#### Frilling

A TROUBLE to which negatives are liable while undergoing treatment in the various solutions — the edges of the gelatine film leave the glass plate and are cockled. It is due to the uneven temperature of the solutions, excess of soda or other alkali in the developer, handling the negatives with warm fingers, the use of strong fixing solutions; or to rapid washing, the water being allowed to impinge upon the edges of the plates in such a way as to lift the films. Frilling may be prevented by hardening the film before or after development with formaline, or a combined fixing and hardening bath may be used. If no precautions are taken, and the gelatine is found to be frilled, it may be more or less remedied by treating with methylated spirit. Frilling is allied to the far more common defect of blistering. Frilling often appears on printing out paper when it is torn. Printing papers should always be cut clean, because rough edges allow the water to get easily under the films, so causing frilling.

Two old-fashioned but serviceable methods of preventing plates from frilling may be mentioned. One is to soak the dryplate before development in a saturated solution of Epsom salts, and the other is to rub a wax or tallow candle round the exposed dryplate, on the film side, before wetting it with the developer. Neither of these, however, is as reliable as immersion in a 10 percent solution of formaldehyde.

*Professional Photographer.*

#### The Menace of Distortion

ACCORDING to dispatches from Europe, "Haig Gets Closer To Lens." We sincerely hope that the gallant Englishman is familiar with the eccentricities of a certain type of lens — the nearer one gets to it, the more violent the foreshortening of the figure, the face and limbs assuming a distorted appearance. General Haig's lens is probably not of the distorting kind.





# RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



**An Apparatus for Producing Photographic Pictures** has been granted to John Edward Thornton, of Rochester, N. Y., assignor to John Owden O'Brien, of Manchester, England. Patentee claims, among other features, the combination with a rotating member having a peripheral groove, a cushion within the groove for supporting a sensitized film, a negative film encircling the member, and transparent device encircling the negative film, of an elongated source of light partly encircling the device. This patent is numbered 1,223,447.

Patent No. 1,222,925, for Film for Color-Kinematography, has been issued to Percy D. Brewster, of East Orange, N. J. The inventor claims, as a new article of manufacture in the art of color-photography, photographic film for the purpose described, comprising two color-sensitive films superposed one on the other and provided with means to hold the two in the same relative positions during exposure in a camera and during subsequent printing-operations, and capable of opening along one edge for the insertion of another film between the two for printing-purposes.

George C. Beidler, of Rochester, N. Y., has been granted two patents, numbered 1,222,596 and 1,222,597, on a Photographing and Developing Apparatus.

A Shutter-Operator for Cameras has just been issued to Roseoe B. Leavitt, of Houston, Mo. The number of said patent is 1,223,807.

An Autographic Attachment for Cameras, No. 1,222,531, has been granted to Samuel C. Cooper, of Nunda, N. Y.

Michael Lichtman, of New York City, has been granted a patent on Photographic Camera No. 1,222,310.

A Camera Mounting, No. 1,221,902, has been issued to Niels Pedersen, of Philadelphia, Pa., assignor to Arthur Brock, Jr., of Philadelphia, Pa.

A Reflecting-Camera has been invented by William F. Folmer, of Rochester, N. Y., assignor to Eastman Kodak Co., of Rochester, N. Y. The number of this patent is 1,221,304.

## Light-Tight Boxes for the Printing-Room

THE one thing that is most conspicuous by its absence in the average printing-room is a light-tight box for exposed or unexposed paper, writes Murston in the *British Journal of Photography*. The packets or boxes in which sensitive paper is issued by the makers are usually most inconvenient as regards rapid opening and closing, and as regards light-tightness when closed—in the latter respect a few makers cannot be found fault with. I have made several very convenient boxes at various times in this way. First decide the size and depth desired, always allowing room to get the fingers around to pick out the paper, and make a frame of thin wood to that size, the width of the wood being the depth of the box. Three-ply can be used, if care is taken, but half-inch stuff makes a much more serviceable box. Another frame is made of a depth of about an inch, and about half-an-inch larger each way than the first, so that it will drop over it and leave a space all around quite slack. A sheet of cardboard is then glued and tacked over each frame, the second frame forming the lid. Brown paper strips are pasted

over the edges and corners to make a good job. The advantage of this sort of box lies first in its cheapness, for every photographer has old mounts or soiled enlargements suitable for the top and bottom; and second, in the great convenience in use, for the lid is light and loose and is lifted by a touch, and again the box is closed instantly by dropping the lid, the loose fit making this certain. At the same time accidental opening is not likely to occur. I have found these boxes particularly useful in large sizes.

## To Sensitize Fabrics

A SALTING or sizing bath is first made by rubbing up 180 grains of arrowroot or dextrine in a little cold water until a smooth paste results; make this up to three-fourths of a pint with boiling water. If the mixture does not at once become gelatinous it should be kept hot (not boiling), and stirred till it does. It should then be allowed to cool a little, and 160 grains of ammonium chloride dissolved in about 4 ounces of water added to it. The mixture is applied while warm to the washed and ironed fabric, which is then dried and sensitized in the following bath:

|                   |       |                     |            |
|-------------------|-------|---------------------|------------|
| A. Citric acid    | ..... | 25 grains           | 50 g.      |
| Distilled water   | ..... | $\frac{1}{2}$ ounce | 500 c.c.s. |
| B. Silver nitrate | ..... | 60 grains           | 125 g.     |
| Distilled water   | ..... | $\frac{1}{2}$ ounce | 500 ccs.   |

Mix the two solutions. To sensitize the fabric use a Buckle or Blanchard brush. Pin the fabric to a flat board, pour upon it a little of the silver sensitizing mixture rapidly and evenly, spread it over the entire surface and dry in the dark. The fabric is printed upon as though it were P.O.P., toned with an acetate and gold toning bath, and fixed and washed like paper. It is desirable after washing and before toning to pass the print through a weak solution of sodium chloride (common salt), which gives reddish brown tones, or of sodium carbonate, which gives brownish purple tones.

## Exposures With Telephoto Lenses

THE well-known suggestion to ascertain the exposure by means of a meter, and then to give twice that, may be sound enough when applied to the subjects and methods generally in use by amateurs, but it will not do when working with telephoto lenses for landscape-purposes. When the nearest shadow is perhaps fifty or a hundred yards from the camera, which is not at all uncommon in such a case, it is very much lighter than it is when close at hand, and the meter-exposure, instead of being on the short side, is apt to be the other way. Experience is the best guide in such cases, and one soon gets to know almost instinctively what allowance to make for the lightening of the deepest shadows by distance. It varies not only with the distance, but with the condition of the atmosphere at the time, as is only what we might expect, since it is essentially an atmospheric phenomenon. The allowance may be less when an orthochromatic plate and a color-screen are used than when they are not; but, in any case, the exposure that is given should not exceed what the meter indicates; while if the distances included are great, and there is any haze, this may well be cut down to one-half or even to one-quarter.—*Photography*.



THE second of April was a memorable day for London — climatically. A blizzard, such as is almost unknown in mid-winter, was raging through the streets. The air was filled with huge, ragged, blinding flakes of snow. The roads and sidewalks were ankle-deep in semi-solid slush. Snow-covered motor-busses and taxis churned their way through, and pedestrians knew it — to their cost. War-time London, unswept London, snow-covered London! London filled with khaki-clad soldiers from dominions, colonies, protectorates; from all the climes of the world. White men, red men, brown men, black men. London a sight worth traveling many miles to see and to record, so bewildering in its abnormal slush and snow, and so stirring in its congregated manhood of empire, all there with one set purpose — the defense of its liberties and the defeat of its enemies. London the luxurious, the clean and tidy, is no more. For the time being, road-sweepers have been taken for more stirring and vital work, and even many of the familiar motor-busses are in France! London is an epitome of the Empire, and shows clearly the bending of the whole energies of the race to the very serious work in hand.

Such were the impressions of your correspondents as they waded along the water-logged Strand on their way to the Camera Club. What a pity military necessities forbid us to record photographically this phase of our city, for it would remain of intense interest for all time.

The new exhibition at the Camera Club proved to be a collection of paintings by a group of Yorkshire artists, and as our business is no more to record such shows than tramps about London, we will spare the reader any further reference to it. But the show at the Camera Club that has just closed is of solid interest to photographers. It was organized by the Platinotype Company, and the work of several well-known professional photographers was shown, all printed in one or another of the processes for which the Platinotype Company is famous. Moreover, it was made the occasion to introduce the first public demonstration of the new palladium printing-process, and many of the prints hanging on the walls were made by it. Palladium, although rarer than platinum, is at the moment cheaper than the last-named metal, and we can hardly doubt that this is the chief cause that has led the enterprising Platinotype Company to introduce it, as it is put on the market at a price lower than platinum-paper. It gives a rich sepia tone by cold development; but it seems that the developer may be used at almost any temperature without ill effect. It is very similar to sepia Japine in appearance, and the manipulation is virtually the same; but the chemicals used are different. One advantage of this new paper is that thin negatives may be made to yield contrasty prints by the addition of bichromate of potash to the developer. If this can be worked accurately and with regularity, it would often be a great convenience to photographers who do not always manage to expose and develop their plates to perfection. We have just lately had occasion to make some sets of prints in *Satista* — the new Platinotype paper referred to some months back — and have found repeatedly that the possibility of bleaching out the silver-image and leaving only the thin platinum impression is a distinct advantage where delicate results are desired. The elimination of the very definite silver-image leaves the print with less detail, a slight vagueness, which is just what one wants for certain effects.

Dr. Atkin Swan, of Alpine photographic fame, and Mr. A. L. Coburn enlivened a recent meeting of the Royal Photographic Society by defending the use of orthochromatic plates, and from very different standpoints. One would have thought that the day was past when such defense was necessary. But somebody was supposed to have ventured the statement that in certain circumstances ordinary plates were superior for a specified purpose to orthochromatic — a perfectly harmless and true assertion, one would have thought. But not so for our doughty champions of orthochromatism. We do not gather that much that was new could be gleaned from either Dr. Swan's learned and scientific discourse, or from Mr. Coburn's treatment of the subject from his own particular point of view. But their seriousness paved the way for an amusing and heated discussion, and in these serious days anything that conduces to merriment is to be welcomed.

Lady Sybil Grant, Lord Rosebery's eldest daughter, who has always taken photography seriously, is now acting as official photographer to the Royal Naval Air-Service Corps at Roehampton. She makes ascents in the kite-balloon several times a week, and her skill and photographic experience enable her to do valuable work, which, it is said, compares favorably with that of the men-photographers. Primrose House, where she has been living for the last seven years, has now been turned into a hospital and, as it is opposite the flying-ground, Lady Sybil has every facility and encouragement to devote herself to this work. We have often collaborated with Lady Sybil, and her original and spontaneous verses have appeared in several magazines illustrated with our child-photographs. On one occasion at Primrose House we got a snapshot of her in the garden surrounded by her Pyrenean mountain-dogs, which breed she has introduced into England. At another time, in Switzerland, we tried a portrait of her on a veranda; but, like many other faces that tempt the photographer, hers is a difficult one to render with any justice. As Lady Sybil Grant has made a successful aerial photographer, one hopes that other women will enter the lists and release some men for the fighting-service. That they have the necessary courage has been proved over and over again since the beginning of the war, and many of them — one knows from exhibitions — have the necessary skill.

There has been much discussion in London, lately, about the films that are shown at the Kinemas, and the authorities are now taking steps that the censoring shall be still more drastic, so that their influence on children shall not be a harmful one. The Kinema Committee, now sitting, procures the direct evidence of children, themselves, which seems going to the root of the matter. It was disappointing, from an educational point of view, to learn that they did not care about flowers, nor were they more interested in birds and their nests. The love-dramas also came in for the disapproval of these young people. When pressed to say what they wanted, three little schoolgirls said "the sort of things that really happened," and another small Irish child said she would like to see a fairy. This last wish was of particular interest to us as we have just completed another children's story with thirty photographic illustrations, the subject being the finding of a fairy by a little girl — not one of the easiest things for the realistic camera to accomplish.

CARINE AND WILL CADBY.



IF, on account of the age-limit or physical disability, you are unable to break a lance for your country, buy a government bond; it is entirely non-taxable.



## Printing in Comfort

PRINTING-MACHINES, human or otherwise, have their legitimate place in the commercial world. Quantity is their end and aim. Photographers — particularly amateurs — who lay claim to the title artist, must needs make their own prints. This implies the use of a printing-frame. The ancestors — if not of all Americans, at least of the American ideal of freedom — left the old cramped life of Europe for the larger, fuller life on this spacious continent. Happy the photographer — artist, amateur or professional — who has the courage to follow their example to the extent of leaving his old printing-frames and obtaining larger ones. The larger the better — up to 8 x 10, even if your largest negative is only  $3\frac{1}{4} \times 4\frac{1}{4}$ . Get the stronger professional style and do not be afraid to get more than one frame. With developing-papers you can load three or four printing-frames almost as easily as one, when your hands are dry between developing-sessions. Sunlight-printing — a most enjoyable experience with six frames — becomes exciting with twelve and highspeed-work with twenty-four.

If you ever use films, let your character develop to the degree necessary for the financial strain of blowing yourself — pardon the expression, but one associates blowing with glass — to some bubble-and-scratch-free plate-glass for all these printing-frames. Every now and then you will more than balance the cost by not having a bubble from the printing-frame glass printed squarely in your Fairy Queen's eye. The larger frame has the advantage that you can insert and remove the paper and view it for sunlight-printing with much greater ease than in the regular size frame built just to fit the size negative you use. In the larger frame, the negative and printing-paper for sunlight-printing may be placed so that the part you wish to examine most particularly during the printing may be viewed easily instead of reposing firmly under the hinge of the back of the frame. You may use a larger size of paper and print two or more negatives on the same sheet, thereby saving something on the cost of paper, and time and bother in washing prints. You can have a broad, white border by using the larger paper masked to the size of your small negative. You can slide the mask around freely and not expose parts of the negative beyond the mask or bend the mask itself. You are able to print several miniature negatives along the hinge of a large frame all at the same time if they are arranged progressively in the order of their density, sliding a piece of cardboard over the thinner negatives as they print.

There is a further economy accomplished by the use of the freedom of space allowed by the larger frame. It is possible with remarkably little trouble to print the best part of two or three negatives on one piece of paper, said paper to be considerably smaller than the combined area of the two or three negatives added together. Protect part of the sensitive paper from light with thin black paper such as one finds in plate-boxes or with films. Print the part of negative you desire, letting the negative lap over on the black paper. Then cover the printed part with black paper and print on the unexposed part. With developing-papers a few pencil-marks will help you to get the black paper in the right place for second printing. Thus, by leaving out the foregrounds, two pictures from the best part of a  $3\frac{1}{4} \times 4\frac{1}{4}$  negative may be printed on a single 4 x 5 sheet or on the postcard-size,  $3\frac{1}{4} \times 5\frac{1}{2}$ .

And now, as the doctor says, "I have saved the bill until the last." A professional or strong, durable, non-cussing printing-frame, according to several catalogs of photo-supplies, averages seventeen percent more in price than the amateur or less satisfactory style. A

printing-frame, like a piano — and some other nice things — lasts a life-time, and seventeen divided by fifty or sixty years looks foolish. The price of the 8 x 10 frame approximates twice that of either  $3\frac{1}{4} \times 4\frac{1}{4}$  or 4 x 5, but you can print twice as many pictures with it more quickly and more comfortably.

For sunlight-printing it is well to pinch the glass and back of the frame near the hinge vigorously with one hand while viewing the progress of the printing, to prevent the slipping of the photo-paper on the negative. But you really have to do this, to prevent slipping, even in the small printing-frame. Moreover, the action soon becomes absolutely automatic, and is performed unconsciously. Up to and including the 5 x 8 size, the back of the frame should be broken for the hinge a third of its length instead of in the middle. This gives the photographer more show literally as well as figuratively. And last but not least, the small printing-frame should be reverently kept in its place, and that is in the attic!

EDWIN B. WHITING.

## Substituting Platinum for Silver

It is possible to turn the image of a bromide or gas-light print from silver into platinum by a method described some years ago by Professor Namias. The image is first thoroughly bleached in a solution of mercuric chloride in the same way that a negative is intensified, and, after washing, is developed in some non-staining developer. The result is a print which has its contrasts greatly increased by the intensification due to supplementing the silver image with mercury. On immersing such a print in an acidified solution of potassium chloroplatinite, such as is used for platinum toning, the mercury in the image is replaced by platinum, and, when this is done, the silver image can be removed altogether by means of one of the ordinary reducers, such as are used for negatives. The process is a good example of the way in which a photographic image once obtained can be modified and transformed in composition; but its interest is theoretical rather than practical.—*Photography*.

## A Rapid Solution

WHEN crystals are placed in water and allowed to lie at the bottom undisturbed they dissolve very slowly. The solution which they form remains round about them and prevents a fresh supply of water from getting to them to continue the dissolving. This is remedied partly by shaking or stirring; but the best way of all is to place the substance to be dissolved in a little bag of muslin, or similar open material, and suspend it just below the top of the liquid. As soon as any dissolves, the solution, being heavier than water, sinks to the bottom of the vessel, and fresh water takes its place; so that solution takes place rapidly without any attention. If the experiment is tried in a glass vessel with some chemical giving a dense solution, as, for example, hypo, the solution can be seen descending from the bag containing the crystals.—*Photography*.

## Flare-Spots and How To Detect Them

MANY a photographer in buying a lens examines it critically for definition right up to the corners of the plate, and beyond if it is to be used with a rising front, but he does not think of testing it to see if it has a flare-spot. He may note that there is no sign of such a defect when the lens is used on the usual trial-subject; but it would be a very bad lens, indeed, if it showed one then. Consequently, when he comes to use it on the type of subject which will show a flare-spot, if one exists, he

finds that his lens is suffering from it, although he may have used the instrument for years without suspecting its latent weakness. To ascertain if one is present, the lens should be focused on a lighted lamp in a room otherwise dark, or on some small window forming an intense highlight. The ground-glass is then critically examined, the camera being twisted about the while, to see if, when the image of the light is in one corner of the screen, there is a ghost-image of it anywhere else. The experiment may be tried with the lamp at different distances, focusing for each; but it is not fair to the lens to have it very near, say within three or four yards,

these may be overcome geometrically by making holes on each side of the center of the "cut-out" to be used, fastening two strings of equal length thereto, pivoted on two nails placed an equal distance from the center pivot—all according to the uprightness of position desired. Due to superiority of group-photographs as described above, three successive legislative bodies purchased pictures of this design in preference to all other composite-group photographs submitted. The same group-arrangement may be used successfully to photograph schools, fraternities, colleges, athletic teams and other organizations. This original idea is



GROUP-PHOTOGRAPH

HOLMBOE STUDIO

since flare is not altogether unavoidable, and one which was only noticed in such circumstances as that would be a good rather than a bad feature, since it has been arranged to become visible only in the circumstances in which it would be least likely to do any harm.

*Photography.*

### An Original Group-Photograph

THROUGH the courtesy of the Holmboe Studio, Bismarck, N. D., we call the attention of photographers to the excellent group-photograph reproduced on this page. The individual portraits are printed on semi-matte paper in order to halftone properly. The original completed picture is 54 by 76, and the background is white felt pasted on Compo-board. The drawing of the diagram is done with rule and compass, in order to ensure perfect symmetry and true curves. The diameter of the circle may be made to suit the individual taste. Each member is grouped according to his seat in the chamber, and the completed picture is an exact diagram of the House. The labels under each picture do away with numbering and re-listing. All necessary data may be read at a glance. White cardboard is used for the labels and the data are written with black ink; then, each card is glued under each picture. For beauty and symmetry of design some prefer the semicircle. Should there be complaints, due to the tilting of the portraits,

generously given to photographers to use to their advantage to promote and hold new business.

### A Flashlight Hint

ALTHOUGH the flashlight-season is over, there are many opportunities to make interesting vacation pictures at night during the summer-months. A very helpful hint is given by R. M. F., in the *Amateur Photographer*, which is well to remember. He says that many photographers, when making at-home portraits by means of flashlight, or domestic figure studies, make a mistake in requesting their sitter or models to keep quite still. To this cause may be traced many failures in this class of work, from woodenness or the "stairiness" in the eyes. It is to be pointed out that the flash, when a flash-powder is used, is practically instantaneous, and any slight movement is of no moment, and is even of very considerable value in preventing the defects mentioned. Of course, this does not apply to any extremely rapid movement, but in domestic figure-subjects any ordinary movements made by the model would not be rapid enough to cause a blurred or doubled image in the negative. Those whose chief cause of failure in this class of work is from the wooden appearance of the models will be well advised to note the point emphasized above, and remember that their exposures are, to all intents and purposes, instantaneous—about a twenty-fifth of a second.



# The Double Cross

for the

## Amateur Photographer and Cyko

A photographic dealer writes  
as follows:

"The finisher who does our work cannot any longer continue to use CYKO Paper on account of the increase in cost of chemicals and labor, and he intends to substitute a cheap brand of paper.

"Our finisher prefers to keep working with ANSCO products to fulfill the promises made in his advertisements as regards quality."

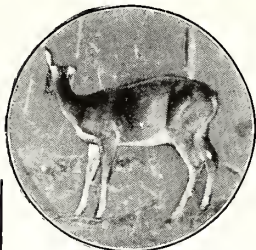
The list price of CYKO is the same today as before the war, although raw materials have doubled in price.

*Can you beat it?*

### AnSCO Company

Binghamton, N. Y.

# Let the Imp Flashlite Gun Make You a **REAL** Photographer



**R**EAL people move! Real pictures show **R**action! You can take action flashlights of yourself or your friends simply by attaching the Imp Flashlite Gun to your camera. Can be used on any camera — on **your** camera! Operates night or day.

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Gun complete, \$1.75

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**APPLICANTS** for positions as operators, salesmen or assistants must furnish evidence of their efficiency and moral character.

**PERSONS** offering for sale studios, or cameras, lenses and other photographic articles, must furnish proof of their good standing and financial responsibility; for obviously PHOTO-ERA will not be the medium of transactions about which there is likely to be the least question.

**FURTHERMORE**, the Publisher reserves the right to refuse applications for space without giving the reason for so doing.

By pursuing this policy, PHOTO-ERA can vouch for the reliability of all its advertisements



REXO  
CAMERAS

# For Snappy, Brilliant Negatives

Load Your Camera With The New

## REXO Record FILM

*"Every Click a Picture"*

Rexo Film marks a new advance in the manufacture of roll film. It was not enough that it possess remarkable speed, superior orthochromatic quality and an emulsion abundantly rich in silver, a new feature has been introduced in Rexo Film.

It is

### The Recording Feature

Ample space is provided between each negative for writing thereon full data relating to each picture. This record is made with ordinary black ink, after the film is developed.



### Try This New Film

We want every amateur in America to try Rexo Film—to get first hand knowledge of its dependability—its superior picture making qualities. Ask your dealer for Rexo Film, and you will find a new aid to better pictures.

### Made In Sizes To Fit All Popular Roll Film Cameras

Rexo Film is the latest Rexo Product to be placed on the market. Its success is already phenomenal. These three products—

## REXO CAMERAS

### Film and Paper

simplify photography and insure a higher percentage of clear, sharp pictures.

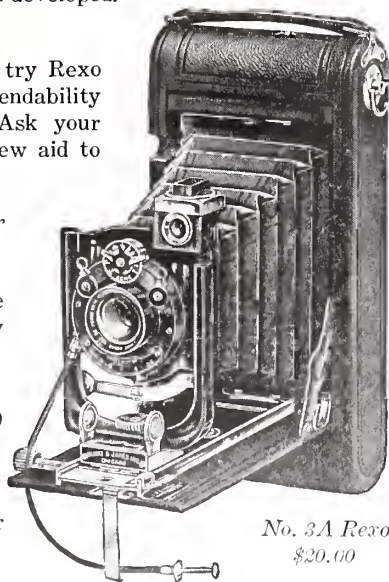
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CHICAGO

**Burke & James Inc**

225 Fifth Avenue  
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No. 3A Rexo  
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# W. E. Dunmore

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*The Only British Wholesale Dealer  
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- ☐ Travelers covering the whole of  
France; very large connection.

# DIANOL

*"The Simple Developer" for*

## Plates, Films and Papers

The developing-solution is made up  
by dissolving in water with Sulphite  
of Soda.

**DIANOL** works without alkali, acts  
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**DIANOL** is the best, most harmless,  
stainless and inexpensive developer  
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**R. J. FITZSIMONS**

**75 Fifth Ave., New York City**

# GOERZ



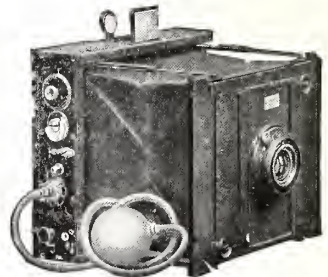
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cras or with instruments fitted with box-finders, were watching the span at the time it fell. At the moment the span gave the first sign of falling, I had merely to keep my eyes upon the bridge while my fingers instinctively pressed the button at the right instant. I know that this picture could not have been obtained with the reflex-type of camera. There was not sufficient time to look into a hood nor to focus the scene upon the ground-glass."

See your dealer about GOERZ CAMERAS and  
GOERZ LENSES.

**T**HE only photographer to catch the  
falling Quebec Bridge was equipped  
with a GOERZ ANGO camera fitted  
with a GOERZ DAGOR lens. Out of over  
one hundred press-photographers at the  
scene, he alone succeeded in obtaining the  
above picture, which is now conceded to be  
one of the most remarkable ever taken. We  
quote the following from the photographer's  
letter:

"Many photog-  
raphers, equipped  
with reflecting cam-



ANGO CAMERA WITH DAGOR LENS

**C.P. GOERZ AMERICAN OPTICAL COMPANY**  
323 EAST 34<sup>TH</sup> STREET : NEW YORK CITY



To Stock Plates for 20  
Years Before Exposing  
is not a method that can be  
recommended, but that *it can be*  
done successfully is shown by the negative  
reproduction herewith



Plates kept and exposure made and developed by  
Mr. S. S. Richards of the U. S. Metals Refining Co., Chrome, N. J.  
Age of Plate, 21 Years

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**CRAMER PLATES**

*Dependable and Good*

G. CRAMER DRY-PLATE CO.

ST. LOUIS, MO.

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**ONE GRAY PARALLAX REFLECTOR**, for 5 x 7 negatives, latest model, including focusing socket, one-half inch adjustment, list-price \$8.00, never used, at bargain-price. Address, F. N. H., care **PHOTO-ERA MAGAZINE**.

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**ONE 5 x 7 PRESS GRAFLEX CAMERA**, perfect condition, with 5 x 8 B. & L. Zeiss Tessar F/4.5 lens. Plate-back with one double holder. Has finder for vertical pictures. A bargain. A. G. **TRENHOLM**, Georgetown, S. C.

**IMPORTED CAMERAS AND LENSES.** New and second-hand—Carl Zeiss, Goerz, Berthiot, Dallmeyer, Voigtlander; Ica, Nettel, Ernemann. Imported Focal-Plane and Reflex **STEREOSCOPIC CAMERAS** a speciality—Gaumont, Verascope, Richard, etc. Ica 5 x 7 enlarging-lantern. Many cameras not to be duplicated; all with their accessories. Take opportunity of **BIG WINTER-DISCOUNTS**. State what you want. A. **MADLINE**, 320 Manhattan Ave., New York City.

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FROM A SMALL OUTLAY  
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\$28.00 We have a few of these cameras. \$15.00  
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F/8, Auto Shutter and Film-Pack Adapter. Regular ICA quality throughout. Very special. Order now.

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## SECOND-HAND LENSES ALL MAKES AND SIZES

Work just as well as new ones. Send for our bargain-list

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To stimulate the sale of Aurora Life-Studies, from living models, we are authorized to offer the portfolio of 63 half-tonereproductions (\$7.50) with any set of direct photographs (\$5.00) for \$10.00, express paid, in the U. S.

PHOTO-ERA - Boston, U. S. A.

## PHOTO-ERA GUARANTY

PHOTO-ERA guarantees the trustworthiness of every advertisement which appears in its pages. Our object is to secure only such advertisers who will accord honorable treatment to every subscriber. We exercise the greatest care in accepting advertisements and publish none which has not been proved desirable by the most searching investigation. Thus in patronizing such advertisers our subscribers protect themselves.

If, despite our precautions, the improbable should occur and a subscriber be subjected to unfair or dishonest treatment, we will do our utmost to effect a satisfactory adjustment, provided that, in answering the advertisement, PHOTO-ERA was mentioned in writing as the medium in which it was seen. The complaint, however, must be made to us within the month for which the issue containing the advertisement was dated.

WILFRED A. FRENCH, Editor and Publisher.

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## **Photo-Era To Increase Its Price**

**I**N CONSEQUENCE of the extraordinary rise in the cost of coated paper, printing and halftones — due to the European war — the Publisher has been obliged to advance the subscription-price of PHOTO-ERA from \$1.50 to \$2.00; single copy, from 15 cents to 20 cents.

The slight increase in price will go into effect March 1, 1917, and subscriptions received before that date will be accorded the old rate, viz., \$1.50 a year; clubbing-price, \$1.25.

Whereas the slight increase of fifty cents may not mean much to the individual subscriber, in the aggregate it is vitally important to the Publisher, as it will enable him to help meet the greatly increased expenses of publishing PHOTO-ERA without diminishing its many excellences that have given it the high reputation it enjoys among photographic magazines.

WILFRED A. FRENCH, Publisher.

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**Devonshire and Water Streets, Boston, Mass.**

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Further particulars will be furnished gladly upon request.  
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# PHOTO-ERA

The American Journal of Photography

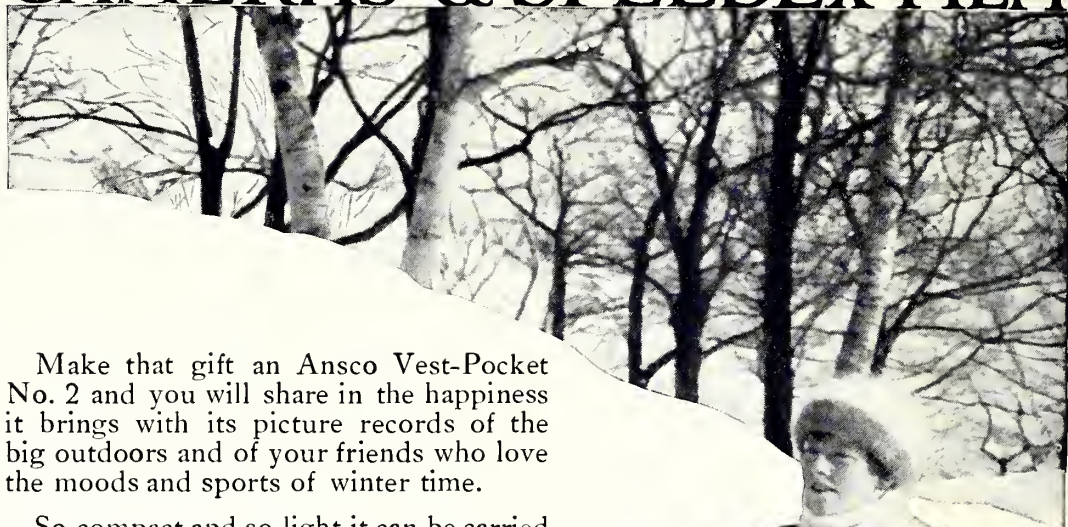


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BOSTON • U.S.A.

# ANSCO

## CAMERAS & SPEEDEX FILM

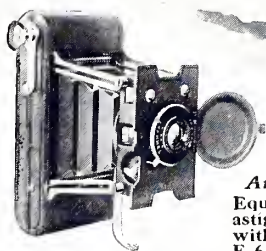


Make that gift an Ansco Vest-Pocket No. 2 and you will share in the happiness it brings with its picture records of the big outdoors and of your friends who love the moods and sports of winter time.

So compact and so light it can be carried in your pocket, the Ansco Vest-Pocket No. 2 can be quickly brought into action to take the picture you want.

It is the smallest and lightest camera made to take  $2\frac{1}{4} \times 3\frac{1}{4}$  pictures, and the only vest-pocket camera with a micrometer focusing device. Clear and sharp enlargements can be made from the pictures it takes.

Ansco Cameras are priced from \$2 up. Get a catalog from the Ansco dealer, or write direct to us.



*Ansco Vest-Pocket No. 2*  
Equipped with Modico Anastigmat Lens, F 7.5, \$17.50;  
with Ansco Anastigmat Lens, F 6.3, in Extraspeed Bionic shutter, \$27.50.



**ANSCO COMPANY**  
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PHOTO-ERA the Blue-Book of Photographic Advertising



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# Vest Pocket Autographic Kodak

Small enough, as you see, to slip in pocket, hand bag or muff and yet big enough, as the resulting pictures will prove, to tell the story in a clean-cut, convincing fashion.

Mechanically as right as a watch  
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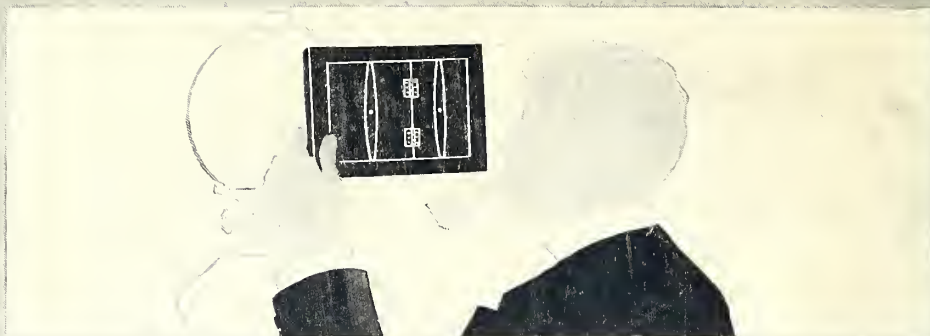
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| Vest Pocket Autographic Kodak, meniscus achromatic lens and Kodak Ball Bearing shutter, . . . . .                             | \$6.00 |
| Vest Pocket Autographic Kodak <i>Special</i> , Kodak Anastigmat lens, <i>f</i> .7.7 and Kodak Ball Bearing shutter, . . . . . | 10.00  |
| Ditto, with Kodak Anastigmat, <i>f</i> .6.9 lens, . . . . .   | 20.00  |
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